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LAMPIRAN

Lampiran 1 Program Matlab

Program Matlab

1.1 Program menentukan komponen musiman

Simulasi A

```
%Import Data
Data1 = xlsread('Data.xlsx','Sheet1','N2:N5');Data2 =
xlsread('Data.xlsx','Sheet1','N3:N6');
Data3 = xlsread('Data.xlsx','Sheet1','N4:N7');Data4 =
xlsread('Data.xlsx','Sheet1','N5:N8');
Data5 = xlsread('Data.xlsx','Sheet1','N6:N9');Data6 =
xlsread('Data.xlsx','Sheet1','N7:N10');
Data7 = xlsread('Data.xlsx','Sheet1','N8:N11');Data8 =
xlsread('Data.xlsx','Sheet1','N9:N12');
Data9 = xlsread('Data.xlsx','Sheet1','N10:N13');Data10 =
xlsread('Data.xlsx','Sheet1','N11:N14');
Data11 = xlsread('Data.xlsx','Sheet1','N12:N15');Data12 =
xlsread('Data.xlsx','Sheet1','N13:N16');
Data13 = xlsread('Data.xlsx','Sheet1','N14:N17');Data14 =
xlsread('Data.xlsx','Sheet1','N15:N18');
Data15 = xlsread('Data.xlsx','Sheet1','N16:N19');Data16 =
xlsread('Data.xlsx','Sheet1','N17:N20');
Data17 = xlsread('Data.xlsx','Sheet1','N18:N21');Data18 =
xlsread('Data.xlsx','Sheet1','N19:N22');
Data19 = xlsread('Data.xlsx','Sheet1','N20:N23');Data20 =
xlsread('Data.xlsx','Sheet1','N21:N24');
Data21 = xlsread('Data.xlsx','Sheet1','N22:N25');
%Menentukan MA
rata1 = mean(Data1);rata2 = mean(Data2);rata3 = mean(Data3);rata4
= mean(Data4);rata5 = mean(Data5);
rata6 = mean(Data6);rata7 = mean(Data7);rata8 = mean(Data8);rata9
= mean(Data9);rata10 = mean(Data10);
rata11 = mean(Data11);rata12 = mean(Data12);rata13 =
mean(Data13);rata14 = mean(Data14);rata15 = mean(Data15);
rata16 = mean(Data16);rata17 = mean(Data17);rata18 =
mean(Data18);rata19 = mean(Data19);rata20 = mean(Data20);
rata21 = mean(Data21);
rata1_3 = [rata1 rata2];rata1_4 = [rata2 rata3];rata2_1 = [rata3
rata4];rata2_2 = [rata4 rata5];rata2_3 = [rata5 rata6];rata2_4 =
[rata6 rata7];
rata3_1 = [rata7 rata8];rata3_2 = [rata8 rata9];rata3_3 = [rata9
rata10];rata3_4 = [rata10 rata11];rata4_1 = [rata11
rata12];rata4_2 = [rata12 rata13];
rata4_3 = [rata13 rata14];rata4_4 = [rata14 rata15];rata5_1 =
[rata15 rata16];rata5_2 = [rata16 rata17];rata5_3 = [rata17
rata18];rata5_4 = [rata18 rata19];
rata6_1 = [rata19 rata20];rata6_2 = [rata20 rata21];
%Menentukan CMA
```

```

Cma1_3 = mean(rata1_3);Cma1_4 = mean(rata1_4);Cma2_1 =
mean(rata2_1);Cma2_2 = mean(rata2_2);Cma2_3 = mean(rata2_3);Cma2_4
= mean(rata2_4);
Cma3_1 = mean(rata3_1);Cma3_2 = mean(rata3_2);Cma3_3 =
mean(rata3_3);Cma3_4 = mean(rata3_4);Cma4_1 = mean(rata4_1);Cma4_2
= mean(rata4_2);
Cma4_3 = mean(rata4_3);Cma4_4 = mean(rata4_4);Cma5_1 =
mean(rata5_1);Cma5_2 = mean(rata5_2);Cma5_3 = mean(rata5_3);Cma5_4
= mean(rata5_4);
Cma6_1 = mean([rata6_1]);Cma6_2 = mean(rata6_2);
%Menentukan detrend
Dt1_3 = xlsread('Data.xlsx','Sheet1','N4')/Cma1_3;Dt1_4
=xlsread('Data.xlsx','Sheet1','N5')/Cma1_4;Dt2_1
=xlsread('Data.xlsx','Sheet1','N6')/Cma2_1;Dt2_2
=xlsread('Data.xlsx','Sheet1','N7')/Cma2_2;Dt2_3
=xlsread('Data.xlsx','Sheet1','N8')/Cma2_3;Dt2_4
=xlsread('Data.xlsx','Sheet1','N9')/Cma2_4;
Dt3_1 =xlsread('Data.xlsx','Sheet1','N10')/Cma3_1;Dt3_2
=xlsread('Data.xlsx','Sheet1','N11')/Cma3_2;Dt3_3
=xlsread('Data.xlsx','Sheet1','N12')/Cma3_3;Dt3_4
=xlsread('Data.xlsx','Sheet1','N13')/Cma3_4;Dt4_1
=xlsread('Data.xlsx','Sheet1','N14')/Cma4_1;Dt4_2
=xlsread('Data.xlsx','Sheet1','N15')/Cma4_2;
Dt4_3 =xlsread('Data.xlsx','Sheet1','N16')/Cma4_3;Dt4_4
=xlsread('Data.xlsx','Sheet1','N17')/Cma4_4;Dt5_1
=xlsread('Data.xlsx','Sheet1','N18')/Cma5_1;Dt5_2
=xlsread('Data.xlsx','Sheet1','N19')/Cma5_2;Dt5_3
=xlsread('Data.xlsx','Sheet1','N20')/Cma5_3;Dt5_4
=xlsread('Data.xlsx','Sheet1','N21')/Cma5_4;
Dt6_1 =xlsread('Data.xlsx','Sheet1','N22')/Cma6_1;Dt6_2
=xlsread('Data.xlsx','Sheet1','N23')/Cma6_2;
%Menentukan komponen musiman
KM1 = (Dt2_1+Dt3_1+Dt4_1+Dt5_1+Dt6_1)/5;
KM2 = (Dt2_2+Dt3_2+Dt4_2+Dt5_2+Dt6_2)/5;
KM3 = (Dt1_3+Dt2_3+Dt3_3+Dt4_3+Dt5_3)/5;
KM4 = (Dt1_4+Dt2_4+Dt3_4+Dt4_4+Dt5_4)/5;
disp('Nilai Komponen Musiman tiap kuartal Simulasi A yaitu:');
disp('Kuartal1 Kuartal2 Kuartal3 Kuartal 4');
disp(sprintf('%4.2f %4.2f %4.2f
%4.2f',KM1,KM2,KM3,KM4));

```

Simulasi B

```

%Import Data
Data1 = xlsread('Data.xlsx','Sheet1','N2:N5');Data2 =
xlsread('Data.xlsx','Sheet1','N3:N6');
Data3 = xlsread('Data.xlsx','Sheet1','N4:N7');Data4 =
xlsread('Data.xlsx','Sheet1','N5:N8');
Data5 = xlsread('Data.xlsx','Sheet1','N6:N9');Data6 =
xlsread('Data.xlsx','Sheet1','N7:N10');
Data7 = xlsread('Data.xlsx','Sheet1','N8:N11');Data8 =
xlsread('Data.xlsx','Sheet1','N9:N12');
Data9 = xlsread('Data.xlsx','Sheet1','N10:N13');Data10 =
xlsread('Data.xlsx','Sheet1','N11:N14');
Data11 = xlsread('Data.xlsx','Sheet1','N12:N15');Data12 =
xlsread('Data.xlsx','Sheet1','N13:N16');

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Data13 = xlsread('Data.xlsx','Sheet1','N14:N17');Data14 =
xlsread('Data.xlsx','Sheet1','N15:N18');
Data15 = xlsread('Data.xlsx','Sheet1','N16:N19');Data16 =
xlsread('Data.xlsx','Sheet1','N17:N20');
Data17 = xlsread('Data.xlsx','Sheet1','N18:N21');Data18 =
xlsread('Data.xlsx','Sheet1','N19:N22');
Data19 = xlsread('Data.xlsx','Sheet1','N20:N23');Data20 =
xlsread('Data.xlsx','Sheet1','N21:N24');
Data21 = xlsread('Data.xlsx','Sheet1','N22:N25');Data22 =
xlsread('Data.xlsx','Sheet1','N23:N26');
Data23 = xlsread('Data.xlsx','Sheet1','N24:N27');Data24 =
xlsread('Data.xlsx','Sheet1','N25:N28');
Data25 = xlsread('Data.xlsx','Sheet1','N26:N29');Data26 =
xlsread('Data.xlsx','Sheet1','N27:N30');
Data27 = xlsread('Data.xlsx','Sheet1','N28:N31');Data28 =
xlsread('Data.xlsx','Sheet1','N29:N32');
Data29 = xlsread('Data.xlsx','Sheet1','N30:N33');Data30 =
xlsread('Data.xlsx','Sheet1','N31:N34');
Data31 = xlsread('Data.xlsx','Sheet1','N32:N35');Data32 =
xlsread('Data.xlsx','Sheet1','N33:N36');
Data33 = xlsread('Data.xlsx','Sheet1','N34:N37');Data34 =
xlsread('Data.xlsx','Sheet1','N35:N38');
Data35 = xlsread('Data.xlsx','Sheet1','N36:N39');Data36 =
xlsread('Data.xlsx','Sheet1','N37:N40');
Data37 = xlsread('Data.xlsx','Sheet1','N38:N41');Data38 =
xlsread('Data.xlsx','Sheet1','N39:N42');
Data39 = xlsread('Data.xlsx','Sheet1','N40:N43');Data40 =
xlsread('Data.xlsx','Sheet1','N41:N44');
Data41 = xlsread('Data.xlsx','Sheet1','N42:N45');
%Menentukan MA
rata1 = mean(Data1);rata2 = mean(Data2);rata3 = mean(Data3);rata4
= mean(Data4);rata5 = mean(Data5);
rata6 = mean(Data6);rata7 = mean(Data7);rata8 = mean(Data8);rata9
= mean(Data9);rata10 = mean(Data10);
rata11 = mean(Data11);rata12 = mean(Data12);rata13 =
mean(Data13);rata14 = mean(Data14);rata15 = mean(Data15);
rata16 = mean(Data16);rata17 = mean(Data17);rata18 =
mean(Data18);rata19 = mean(Data19);rata20 = mean(Data20);
rata21 = mean(Data21);rata22 = mean(Data22);rata23 =
mean(Data23);rata24 = mean(Data24);rata25 = mean(Data25);
rata26 = mean(Data26);rata27 = mean(Data27);rata28 =
mean(Data28);rata29 = mean(Data29);rata30 = mean(Data30);
rata31 = mean(Data31);rata32 = mean(Data32);rata33 =
mean(Data33);rata34 = mean(Data34);rata35 = mean(Data35);
rata36 = mean(Data36);rata37 = mean(Data37);rata38 =
mean(Data38);rata39 = mean(Data39);rata40 = mean(Data40);rata41 =
mean(Data41);
rata1_3 = [rata1 rata2];rata1_4 = [rata2 rata3];rata2_1 = [rata3
rata4];rata2_2 = [rata4 rata5];rata2_3 = [rata5 rata6];rata2_4 =
[rata6 rata7];
rata3_1 = [rata7 rata8];rata3_2 = [rata8 rata9];rata3_3 = [rata9
rata10];rata3_4 = [rata10 rata11];rata4_1 = [rata11
rata12];rata4_2 = [rata12 rata13];
rata4_3 = [rata13 rata14];rata4_4 = [rata14 rata15];rata5_1 =
[rata15 rata16];rata5_2 = [rata16 rata17];rata5_3 = [rata17
rata18];rata5_4 = [rata18 rata19];

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rata6_1 = [rata19 rata20];rata6_2 = [rata20 rata21];rata6_3 =
[rata21 rata22];rata6_4 = [rata22 rata23];
rata7_1 = [rata23 rata24];rata7_2 = [rata24 rata25];rata7_3 =
[rata25 rata26];rata7_4 = [rata26 rata27];
rata8_1 = [rata27 rata28];rata8_2 = [rata28 rata29];rata8_3 =
[rata29 rata30];rata8_4 = [rata30 rata31];
rata9_1 = [rata31 rata32];rata9_2 = [rata32 rata33];rata9_3 =
[rata33 rata34];rata9_4 = [rata34 rata35];
rata10_1 = [rata35 rata36];rata10_2 = [rata36 rata37];rata10_3 =
[rata37 rata38];rata10_4 = [rata38 rata39];
rata11_1 = [rata39 rata40];rata11_2 = [rata40 rata41];
%Menentukan CMA
Cma1_3 = mean(rata1_3);Cma1_4 = mean(rata1_4);Cma2_1 =
mean(rata2_1);Cma2_2 = mean(rata2_2);Cma2_3 = mean(rata2_3);Cma2_4
= mean(rata2_4);
Cma3_1 = mean(rata3_1);Cma3_2 = mean(rata3_2);Cma3_3 =
mean(rata3_3);Cma3_4 = mean(rata3_4);Cma4_1 = mean(rata4_1);Cma4_2
= mean(rata4_2);
Cma4_3 = mean(rata4_3);Cma4_4 = mean(rata4_4);Cma5_1 =
mean(rata5_1);Cma5_2 = mean(rata5_2);Cma5_3 = mean(rata5_3);Cma5_4
= mean(rata5_4);
Cma6_1 = mean([rata6_1]);Cma6_2 = mean(rata6_2);Cma6_3 =
mean(rata6_3);Cma6_4 = mean(rata6_4);
Cma7_1 = mean(rata7_1);Cma7_2 = mean(rata7_2);Cma7_3 =
mean(rata7_3);Cma7_4 = mean(rata7_4);
Cma8_1 = mean([rata8_1]);Cma8_2 = mean(rata8_2);Cma8_3 =
mean(rata8_3);Cma8_4 = mean(rata8_4);
Cma9_1 = mean(rata9_1);Cma9_2 = mean(rata9_2);Cma9_3 =
mean(rata9_3);Cma9_4 = mean(rata9_4);
Cma10_1 = mean([rata10_1]);Cma10_2 = mean(rata10_2);Cma10_3 =
mean(rata10_3);Cma10_4 = mean(rata10_4);
Cma11_1 = mean(rata11_1);Cma11_2 = mean(rata11_2);
%Menentukan detrend

Dt1_3 = xlsread('Data.xlsx','Sheet1','N4')/Cma1_3;Dt1_4
=xlsread('Data.xlsx','Sheet1','N5')/Cma1_4;
Dt2_1 =xlsread('Data.xlsx','Sheet1','N6')/Cma2_1;Dt2_2
=xlsread('Data.xlsx','Sheet1','N7')/Cma2_2;Dt2_3
=xlsread('Data.xlsx','Sheet1','N8')/Cma2_3;Dt2_4
=xlsread('Data.xlsx','Sheet1','N9')/Cma2_4;
Dt3_1 =xlsread('Data.xlsx','Sheet1','N10')/Cma3_1;Dt3_2
=xlsread('Data.xlsx','Sheet1','N11')/Cma3_2;Dt3_3
=xlsread('Data.xlsx','Sheet1','N12')/Cma3_3;Dt3_4
=xlsread('Data.xlsx','Sheet1','N13')/Cma3_4;
Dt4_1 =xlsread('Data.xlsx','Sheet1','N14')/Cma4_1;Dt4_2
=xlsread('Data.xlsx','Sheet1','N15')/Cma4_2;Dt4_3
=xlsread('Data.xlsx','Sheet1','N16')/Cma4_3;Dt4_4
=xlsread('Data.xlsx','Sheet1','N17')/Cma4_4;
Dt5_1 =xlsread('Data.xlsx','Sheet1','N18')/Cma5_1;Dt5_2
=xlsread('Data.xlsx','Sheet1','N19')/Cma5_2;Dt5_3
=xlsread('Data.xlsx','Sheet1','N20')/Cma5_3;Dt5_4
=xlsread('Data.xlsx','Sheet1','N21')/Cma5_4;
Dt6_1 =xlsread('Data.xlsx','Sheet1','N22')/Cma6_1;Dt6_2
=xlsread('Data.xlsx','Sheet1','N23')/Cma6_2;Dt6_3
=xlsread('Data.xlsx','Sheet1','N24')/Cma6_3;Dt6_4
=xlsread('Data.xlsx','Sheet1','N25')/Cma6_4;

```

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Dt7_1 =xlsread('Data.xlsx','Sheet1','N26')/Cma7_1;Dt7_2
=xlsread('Data.xlsx','Sheet1','N27')/Cma7_2;Dt7_3
=xlsread('Data.xlsx','Sheet1','N28')/Cma7_3;Dt7_4
=xlsread('Data.xlsx','Sheet1','N29')/Cma7_4;
Dt8_1 =xlsread('Data.xlsx','Sheet1','N30')/Cma8_1;Dt8_2
=xlsread('Data.xlsx','Sheet1','N31')/Cma8_2;Dt8_3
=xlsread('Data.xlsx','Sheet1','N32')/Cma8_3;Dt8_4
=xlsread('Data.xlsx','Sheet1','N33')/Cma8_4;
Dt9_1 =xlsread('Data.xlsx','Sheet1','N34')/Cma9_1;Dt9_2
=xlsread('Data.xlsx','Sheet1','N35')/Cma9_2;Dt9_3
=xlsread('Data.xlsx','Sheet1','N36')/Cma9_3;Dt9_4
=xlsread('Data.xlsx','Sheet1','N37')/Cma9_4;
Dt10_1 =xlsread('Data.xlsx','Sheet1','N38')/Cma10_1;Dt10_2
=xlsread('Data.xlsx','Sheet1','N39')/Cma10_2;Dt10_3
=xlsread('Data.xlsx','Sheet1','N40')/Cma10_3;Dt10_4
=xlsread('Data.xlsx','Sheet1','N41')/Cma10_4;
Dt11_1 =xlsread('Data.xlsx','Sheet1','N42')/Cma11_1;Dt11_2
=xlsread('Data.xlsx','Sheet1','N43')/Cma11_2;
%Menentukan komponen musiman
KM1 =
(Dt2_1+Dt3_1+Dt4_1+Dt5_1+Dt6_1+Dt7_1+Dt8_1+Dt9_1+Dt10_1+Dt11_1)/10
;
KM2 =
(Dt2_2+Dt3_2+Dt4_2+Dt5_2+Dt6_2+Dt7_2+Dt8_2+Dt9_2+Dt10_2+Dt11_2)/10
;
KM3 =
(Dt1_3+Dt2_3+Dt3_3+Dt4_3+Dt5_3+Dt6_3+Dt7_3+Dt8_3+Dt9_3+Dt10_3)/10;
KM4 =
(Dt1_4+Dt2_4+Dt3_4+Dt4_4+Dt5_4+Dt6_4+Dt7_4+Dt8_4+Dt9_4+Dt10_4)/10;
disp('Nilai Komponen Musiman tiap kuartal Simulasi B yaitu:');
disp('Kuartal1 Kuartal2 Kuartal3 Kuartal 4');
disp(sprintf('%4.2f %4.2f %4.2f
%4.2f',KM1,KM2,KM3,KM4));

```

Simulasi C

```

%Import Data
Data1 = xlsread('Data.xlsx','Sheet1','N2:N5');Data2 =
xlsread('Data.xlsx','Sheet1','N3:N6');
Data3 = xlsread('Data.xlsx','Sheet1','N4:N7');Data4 =
xlsread('Data.xlsx','Sheet1','N5:N8');
Data5 = xlsread('Data.xlsx','Sheet1','N6:N9');Data6 =
xlsread('Data.xlsx','Sheet1','N7:N10');
Data7 = xlsread('Data.xlsx','Sheet1','N8:N11');Data8 =
xlsread('Data.xlsx','Sheet1','N9:N12');
Data9 = xlsread('Data.xlsx','Sheet1','N10:N13');Data10 =
xlsread('Data.xlsx','Sheet1','N11:N14');
Data11 = xlsread('Data.xlsx','Sheet1','N12:N15');Data12 =
xlsread('Data.xlsx','Sheet1','N13:N16');
Data13 = xlsread('Data.xlsx','Sheet1','N14:N17');Data14 =
xlsread('Data.xlsx','Sheet1','N15:N18');
Data15 = xlsread('Data.xlsx','Sheet1','N16:N19');Data16 =
xlsread('Data.xlsx','Sheet1','N17:N20');
Data17 = xlsread('Data.xlsx','Sheet1','N18:N21');Data18 =
xlsread('Data.xlsx','Sheet1','N19:N22');

```

```

Data19 = xlsread('Data.xlsx','Sheet1','N20:N23');Data20 =
xlsread('Data.xlsx','Sheet1','N21:N24');
Data21 = xlsread('Data.xlsx','Sheet1','N22:N25');Data22 =
xlsread('Data.xlsx','Sheet1','N23:N26');
Data23 = xlsread('Data.xlsx','Sheet1','N24:N27');Data24 =
xlsread('Data.xlsx','Sheet1','N25:N28');
Data25 = xlsread('Data.xlsx','Sheet1','N26:N29');Data26 =
xlsread('Data.xlsx','Sheet1','N27:N30');
Data27 = xlsread('Data.xlsx','Sheet1','N28:N31');Data28 =
xlsread('Data.xlsx','Sheet1','N29:N32');
Data29 = xlsread('Data.xlsx','Sheet1','N30:N33');Data30 =
xlsread('Data.xlsx','Sheet1','N31:N34');
Data31 = xlsread('Data.xlsx','Sheet1','N32:N35');Data32 =
xlsread('Data.xlsx','Sheet1','N33:N36');
Data33 = xlsread('Data.xlsx','Sheet1','N34:N37');Data34 =
xlsread('Data.xlsx','Sheet1','N35:N38');
Data35 = xlsread('Data.xlsx','Sheet1','N36:N39');Data36 =
xlsread('Data.xlsx','Sheet1','N37:N40');
Data37 = xlsread('Data.xlsx','Sheet1','N38:N41');Data38 =
xlsread('Data.xlsx','Sheet1','N39:N42');
Data39 = xlsread('Data.xlsx','Sheet1','N40:N43');Data40 =
xlsread('Data.xlsx','Sheet1','N41:N44');
Data41 = xlsread('Data.xlsx','Sheet1','N42:N45');Data42 =
xlsread('Data.xlsx','Sheet1','N43:N46');
Data43 = xlsread('Data.xlsx','Sheet1','N44:N47');Data44 =
xlsread('Data.xlsx','Sheet1','N45:N48');
Data45 = xlsread('Data.xlsx','Sheet1','N46:N49');Data46 =
xlsread('Data.xlsx','Sheet1','N47:N50');
Data47 = xlsread('Data.xlsx','Sheet1','N48:N51');Data48 =
xlsread('Data.xlsx','Sheet1','N49:N52');
Data49 = xlsread('Data.xlsx','Sheet1','N50:N53');Data50 =
xlsread('Data.xlsx','Sheet1','N51:N54');
Data51 = xlsread('Data.xlsx','Sheet1','N52:N55');Data52 =
xlsread('Data.xlsx','Sheet1','N53:N56');
Data53 = xlsread('Data.xlsx','Sheet1','N54:N57');Data54 =
xlsread('Data.xlsx','Sheet1','N55:N58');
Data55 = xlsread('Data.xlsx','Sheet1','N56:N59');Data56 =
xlsread('Data.xlsx','Sheet1','N57:N60');
Data57 = xlsread('Data.xlsx','Sheet1','N58:N61');Data58 =
xlsread('Data.xlsx','Sheet1','N59:N62');
Data59 = xlsread('Data.xlsx','Sheet1','N60:N63');Data60 =
xlsread('Data.xlsx','Sheet1','N61:N64');
Data61 = xlsread('Data.xlsx','Sheet1','N62:N65');
%Menentukan MA
rata1 = mean(Data1);rata2 = mean(Data2);rata3 = mean(Data3);rata4
= mean(Data4);rata5 = mean(Data5);
rata6 = mean(Data6);rata7 = mean(Data7);rata8 = mean(Data8);rata9
= mean(Data9);rata10 = mean(Data10);
rata11 = mean(Data11);rata12 = mean(Data12);rata13 =
mean(Data13);rata14 = mean(Data14);rata15 = mean(Data15);
rata16 = mean(Data16);rata17 = mean(Data17);rata18 =
mean(Data18);rata19 = mean(Data19);rata20 = mean(Data20);
rata21 = mean(Data21);rata22 = mean(Data22);rata23 =
mean(Data23);rata24 = mean(Data24);rata25 = mean(Data25);
rata26 = mean(Data26);rata27 = mean(Data27);rata28 =
mean(Data28);rata29 = mean(Data29);rata30 = mean(Data30);

```



```

rata31 = mean(Data31);rata32 = mean(Data32);rata33 =
mean(Data33);rata34 = mean(Data34);rata35 = mean(Data35);
rata36 = mean(Data36);rata37 = mean(Data37);rata38 =
mean(Data38);rata39 = mean(Data39);rata40 = mean(Data40);
rata41 = mean(Data41);rata42 = mean(Data42);rata43 =
mean(Data43);rata44 = mean(Data44);rata45 = mean(Data45);
rata46 = mean(Data46);rata47 = mean(Data47);rata48 =
mean(Data48);rata49 = mean(Data49);rata50 = mean(Data50);
rata51 = mean(Data51);rata52 = mean(Data52);rata53 =
mean(Data53);rata54 = mean(Data54);rata55 = mean(Data55);
rata56 = mean(Data56);rata57 = mean(Data57);rata58 =
mean(Data58);rata59 = mean(Data59);rata60 = mean(Data60);rata61 =
mean(Data61);
rata1_3 = [rata1 rata2];rata1_4 = [rata2 rata3];rata2_1 = [rata3
rata4];rata2_2 = [rata4 rata5];rata2_3 = [rata5 rata6];rata2_4 =
[rata6 rata7];
rata3_1 = [rata7 rata8];rata3_2 = [rata8 rata9];rata3_3 = [rata9
rata10];rata3_4 = [rata10 rata11];rata4_1 = [rata11
rata12];rata4_2 = [rata12 rata13];
rata4_3 = [rata13 rata14];rata4_4 = [rata14 rata15];rata5_1 =
[rata15 rata16];rata5_2 = [rata16 rata17];rata5_3 = [rata17
rata18];rata5_4 = [rata18 rata19];
rata6_1 = [rata19 rata20];rata6_2 = [rata20 rata21];rata6_3 =
[rata21 rata22];rata6_4 = [rata22 rata23];
rata7_1 = [rata23 rata24];rata7_2 = [rata24 rata25];rata7_3 =
[rata25 rata26];rata7_4 = [rata26 rata27];
rata8_1 = [rata27 rata28];rata8_2 = [rata28 rata29];rata8_3 =
[rata29 rata30];rata8_4 = [rata30 rata31];
rata9_1 = [rata31 rata32];rata9_2 = [rata32 rata33];rata9_3 =
[rata33 rata34];rata9_4 = [rata34 rata35];
rata10_1 = [rata35 rata36];rata10_2 = [rata36 rata37];rata10_3 =
[rata37 rata38];rata10_4 = [rata38 rata39];
rata11_1 = [rata39 rata40];rata11_2 = [rata40 rata41];rata11_3 =
[rata41 rata42];rata11_4 = [rata42 rata43];
rata12_1 = [rata43 rata44];rata12_2 = [rata44 rata45];rata12_3 =
[rata45 rata45];rata12_4 = [rata46 rata47];
rata13_1 = [rata47 rata48];rata13_2 = [rata48 rata49];rata13_3 =
[rata49 rata50];rata13_4 = [rata50 rata51];
rata14_1 = [rata51 rata52];rata14_2 = [rata52 rata53];rata14_3 =
[rata53 rata54];rata14_4 = [rata54 rata55];
rata15_1 = [rata55 rata56];rata15_2 = [rata56 rata57];rata15_3 =
[rata57 rata58];rata15_4 = [rata58 rata59];
rata16_1 = [rata59 rata60];rata16_2 = [rata60 rata61];
%Menentukan CMA
Cma1_3 = mean(rata1_3);Cma1_4 = mean(rata1_4);Cma2_1 =
mean(rata2_1);Cma2_2 = mean(rata2_2);Cma2_3 = mean(rata2_3);Cma2_4
= mean(rata2_4);
Cma3_1 = mean(rata3_1);Cma3_2 = mean(rata3_2);Cma3_3 =
mean(rata3_3);Cma3_4 = mean(rata3_4);Cma4_1 = mean(rata4_1);Cma4_2
= mean(rata4_2);
Cma4_3 = mean(rata4_3);Cma4_4 = mean(rata4_4);Cma5_1 =
mean(rata5_1);Cma5_2 = mean(rata5_2);Cma5_3 = mean(rata5_3);Cma5_4
= mean(rata5_4);
Cma6_1 = mean(rata6_1);Cma6_2 = mean(rata6_2);Cma6_3 =
mean(rata6_3);Cma6_4 = mean(rata6_4);

```

```

Cma7_1 = mean(rata7_1);Cma7_2 = mean(rata7_2);Cma7_3 =
mean(rata7_3);Cma7_4 = mean(rata7_4);
Cma8_1 = mean(rata8_1);Cma8_2 = mean(rata8_2);Cma8_3 =
mean(rata8_3);Cma8_4 = mean(rata8_4);
Cma9_1 = mean(rata9_1);Cma9_2 = mean(rata9_2);Cma9_3 =
mean(rata9_3);Cma9_4 = mean(rata9_4);
Cma10_1 = mean(rata10_1);Cma10_2 = mean(rata10_2);Cma10_3 =
mean(rata10_3);Cma10_4 = mean(rata10_4);
Cma11_1 = mean(rata11_1);Cma11_2 = mean(rata11_2);Cma11_3 =
mean(rata11_3);Cma11_4 = mean(rata11_4);
Cma12_1 = mean(rata12_1);Cma12_2 = mean(rata12_2);Cma12_3 =
mean(rata12_3);Cma12_4 = mean(rata12_4);
Cma13_1 = mean(rata13_1);Cma13_2 = mean(rata13_2);Cma13_3 =
mean(rata13_3);Cma13_4 = mean(rata13_4);
Cma14_1 = mean(rata14_1);Cma14_2 = mean(rata14_2);Cma14_3 =
mean(rata14_3);Cma14_4 = mean(rata14_4);
Cma15_1 = mean(rata15_1);Cma15_2 = mean(rata15_2);Cma15_3 =
mean(rata15_3);Cma15_4 = mean(rata15_4);
Cma16_1 = mean(rata16_1);Cma16_2 = mean(rata16_2);
%Menentukan detrend
Dt1_3 = xlsread('Data.xlsx','Sheet1','N4')/Cma1_3;Dt1_4
=xlsread('Data.xlsx','Sheet1','N5')/Cma1_4;
Dt2_1 =xlsread('Data.xlsx','Sheet1','N6')/Cma2_1;Dt2_2
=xlsread('Data.xlsx','Sheet1','N7')/Cma2_2;Dt2_3
=xlsread('Data.xlsx','Sheet1','N8')/Cma2_3;Dt2_4
=xlsread('Data.xlsx','Sheet1','N9')/Cma2_4;
Dt3_1 =xlsread('Data.xlsx','Sheet1','N10')/Cma3_1;Dt3_2
=xlsread('Data.xlsx','Sheet1','N11')/Cma3_2;Dt3_3
=xlsread('Data.xlsx','Sheet1','N12')/Cma3_3;Dt3_4
=xlsread('Data.xlsx','Sheet1','N13')/Cma3_4;
Dt4_1 =xlsread('Data.xlsx','Sheet1','N14')/Cma4_1;Dt4_2
=xlsread('Data.xlsx','Sheet1','N15')/Cma4_2;Dt4_3
=xlsread('Data.xlsx','Sheet1','N16')/Cma4_3;Dt4_4
=xlsread('Data.xlsx','Sheet1','N17')/Cma4_4;
Dt5_1 =xlsread('Data.xlsx','Sheet1','N18')/Cma5_1;Dt5_2
=xlsread('Data.xlsx','Sheet1','N19')/Cma5_2;Dt5_3
=xlsread('Data.xlsx','Sheet1','N20')/Cma5_3;Dt5_4
=xlsread('Data.xlsx','Sheet1','N21')/Cma5_4;
Dt6_1 =xlsread('Data.xlsx','Sheet1','N22')/Cma6_1;Dt6_2
=xlsread('Data.xlsx','Sheet1','N23')/Cma6_2;Dt6_3
=xlsread('Data.xlsx','Sheet1','N24')/Cma6_3;Dt6_4
=xlsread('Data.xlsx','Sheet1','N25')/Cma6_4;
Dt7_1 =xlsread('Data.xlsx','Sheet1','N26')/Cma7_1;Dt7_2
=xlsread('Data.xlsx','Sheet1','N27')/Cma7_2;Dt7_3
=xlsread('Data.xlsx','Sheet1','N28')/Cma7_3;Dt7_4
=xlsread('Data.xlsx','Sheet1','N29')/Cma7_4;
Dt8_1 =xlsread('Data.xlsx','Sheet1','N30')/Cma8_1;Dt8_2
=xlsread('Data.xlsx','Sheet1','N31')/Cma8_2;Dt8_3
=xlsread('Data.xlsx','Sheet1','N32')/Cma8_3;Dt8_4
=xlsread('Data.xlsx','Sheet1','N33')/Cma8_4;
Dt9_1 =xlsread('Data.xlsx','Sheet1','N34')/Cma9_1;Dt9_2
=xlsread('Data.xlsx','Sheet1','N35')/Cma9_2;Dt9_3
=xlsread('Data.xlsx','Sheet1','N36')/Cma9_3;Dt9_4
=xlsread('Data.xlsx','Sheet1','N37')/Cma9_4;
Dt10_1 =xlsread('Data.xlsx','Sheet1','N38')/Cma10_1;Dt10_2
=xlsread('Data.xlsx','Sheet1','N39')/Cma10_2;Dt10_3

```

```

=xlsread('Data.xlsx','Sheet1','N40')/Cma10_3;Dt10_4
=xlsread('Data.xlsx','Sheet1','N41')/Cma10_4;
Dt11_1 =xlsread('Data.xlsx','Sheet1','N42')/Cma11_1;Dt11_2
=xlsread('Data.xlsx','Sheet1','N43')/Cma11_2;Dt11_3
=xlsread('Data.xlsx','Sheet1','N44')/Cma11_3;Dt11_4
=xlsread('Data.xlsx','Sheet1','N45')/Cma11_4;
Dt12_1 =xlsread('Data.xlsx','Sheet1','N46')/Cma12_1;Dt12_2
=xlsread('Data.xlsx','Sheet1','N47')/Cma12_2;Dt12_3
=xlsread('Data.xlsx','Sheet1','N48')/Cma12_3;Dt12_4
=xlsread('Data.xlsx','Sheet1','N49')/Cma12_4;
Dt13_1 =xlsread('Data.xlsx','Sheet1','N50')/Cma13_1;Dt13_2
=xlsread('Data.xlsx','Sheet1','N51')/Cma13_2;Dt13_3
=xlsread('Data.xlsx','Sheet1','N52')/Cma13_3;Dt13_4
=xlsread('Data.xlsx','Sheet1','N53')/Cma13_4;
Dt14_1 =xlsread('Data.xlsx','Sheet1','N54')/Cma14_1;Dt14_2
=xlsread('Data.xlsx','Sheet1','N55')/Cma14_2;Dt14_3
=xlsread('Data.xlsx','Sheet1','N56')/Cma14_3;Dt14_4
=xlsread('Data.xlsx','Sheet1','N57')/Cma14_4;
Dt15_1 =xlsread('Data.xlsx','Sheet1','N58')/Cma15_1;Dt15_2
=xlsread('Data.xlsx','Sheet1','N59')/Cma15_2;Dt15_3
=xlsread('Data.xlsx','Sheet1','N60')/Cma15_3;Dt15_4
=xlsread('Data.xlsx','Sheet1','N61')/Cma15_4;
Dt16_1 =xlsread('Data.xlsx','Sheet1','N62')/Cma16_1;Dt16_2
=xlsread('Data.xlsx','Sheet1','N63')/Cma16_2;
%Menentukan komponen musiman
KM1 =
(Dt2_1+Dt3_1+Dt4_1+Dt5_1+Dt6_1+Dt7_1+Dt8_1+Dt9_1+Dt10_1+Dt11_1+Dt1
2_1+Dt13_1+Dt14_1+Dt15_1+Dt16_1)/15;
KM2 =
(Dt2_2+Dt3_2+Dt4_2+Dt5_2+Dt6_2+Dt7_2+Dt8_2+Dt9_2+Dt10_2+Dt11_2+Dt1
2_2+Dt13_2+Dt14_2+Dt15_2+Dt16_2)/15;
KM3 =
(Dt1_3+Dt2_3+Dt3_3+Dt4_3+Dt5_3+Dt6_3+Dt7_3+Dt8_3+Dt9_3+Dt10_3+Dt11
_3+Dt12_3+Dt13_3+Dt14_3+Dt15_3)/15;
KM4 =
(Dt1_4+Dt2_4+Dt3_4+Dt4_4+Dt5_4+Dt6_4+Dt7_4+Dt8_4+Dt9_4+Dt10_4+Dt11
_4+Dt12_4+Dt13_4+Dt14_4+Dt15_4)/15;
disp('Nilai Komponen Musiman tiap kuartal Simulasi C yaitu:');
disp('Kuartal1 Kuartal2 Kuartal3 Kuartal 4');
disp(sprintf('%4.2f %4.2f %4.2f
%4.2f',KM1,KM2,KM3,KM4));

```

1.2 Program menentukan komponen trend

Simulasi A

```

%disp('Nilai Komponen Trend Berdasarkan Periode');
%disp('Nilai Komponen Trend Berdasarkan Temperatur');
%disp('Nilai Komponen Trend Berdasarkan Arah Angin');
X= xlsread('Data.xlsx','Sheet1','L2:L25');
Y= xlsread('Data.xlsx','Sheet1','N2:N25');
b=((length(X))*(sum(X.*Y))-
(sum(X))*(sum(Y)))/((length(X))*(sum(X.^2))-((sum(X))^2));

```

```

a=(sum(Y)*(sum(X.^2))-
(sum(X))*(sum(X.*Y)))/((length(X))*(sum(X.^2))-((sum(X))^2));
N= 1:65;
%N= xlsread('Data.xlsx','Sheet1','O26:O90');
%N= xlsread('Data.xlsx','Sheet1','P26:P90');
trend = a + b*N;
xlswrite('komponen trend berdasarkan periode Simulasi
A.xlsx',[trend(:)],'sheet1','A1');
%xlswrite('komponen trend berdasarkan temperatur Simulasi
A.xlsx',[trend(:)],'sheet1','A1');
%xlswrite('komponen trend berdasarkan arah angin Simulasi
A.xlsx',[trend(:)],'sheet1','A1');
fprintf('Nilai komponen trend yaitu %4.2f\n',trend);
x = 25:89;
y = trend;
%y1 = xlsread('RMSE arah angin 2021.xlsx','Sheet2','Q33:Q60');
%plot(datenum(2021,03,x),y,'-r',datenum(2021,03,x),y1,'-b');
stem(datenum(2021,02,x),y,'-r');
title('Komponen Trend Berdasarkan Periode Simulasi A');
xlabel('Tanggal'); ylabel('Kecepatan Angin (m/s)');
grid on
datetick('x',1,'keeplimits','kepticks')

```

Simulasi B

```

%disp('Nilai Komponen Trend Berdasarkan Periode');
%disp('Nilai Komponen Trend Berdasarkan Temperatur');
%disp('Nilai Komponen Trend Berdasarkan Arah Angin');
X= xlsread('Data.xlsx','Sheet1','P2:P45');
Y= xlsread('Data.xlsx','Sheet1','N2:N45');
b=((length(X))*(sum(X.*Y))-
(sum(X))*(sum(Y)))/((length(X))*(sum(X.^2))-((sum(X))^2));
a=(sum(Y)*(sum(X.^2))-
(sum(X))*(sum(X.*Y)))/((length(X))*(sum(X.^2))-((sum(X))^2));
%N= 1:45;
%N= xlsread('Data.xlsx','Sheet1','O46:O90');
N= xlsread('Data.xlsx','Sheet1','P46:P90');
trend = a + b*N;
%xlswrite('komponen trend berdasarkan periode Simulasi
B.xlsx',[trend(:)],'sheet1','A1');
%xlswrite('komponen trend berdasarkan temperatur Simulasi
B.xlsx',[trend(:)],'sheet1','A1');
xlswrite('komponen trend berdasarkan arah angin Simulasi
B.xlsx',[trend(:)],'sheet1','A1');
fprintf('Nilai komponen trend yaitu %4.2f\n',trend);
x = 17:61;
y = trend;
%y1 = xlsread('RMSE arah angin 2021.xlsx','Sheet2','Q33:Q60');
%plot(datenum(2021,03,x),y,'-r',datenum(2021,03,x),y1,'-b');
stem(datenum(2021,03,x),y,'-r');
title('Komponen Trend Berdasarkan Arah Angin Simulasi B');
xlabel('Tanggal'); ylabel('Nilai Trend');
grid on
datetick('x',1,'keeplimits','kepticks')

```

Simulasi C

```
%disp('Nilai Komponen Trend Berdasarkan Periode');
%disp('Nilai Komponen Trend Berdasarkan Temperatur');
%disp('Nilai Komponen Trend Berdasarkan Arah Angin');
X= xlsread('Data.xlsx','Sheet1','L2:L65');
Y= xlsread('Data.xlsx','Sheet1','N2:N65');
b=((length(X))*(sum(X.*Y))-
(sum(X))*(sum(Y)))/((length(X))*(sum(X.^2))-((sum(X))^2));
a=(sum(Y)*(sum(X.^2))-
(sum(X))*(sum(X.*Y)))/((length(X))*(sum(X.^2))-((sum(X))^2));
N= 1:25;
%N= xlsread('Data.xlsx','Sheet1','O66:O90');
%N= xlsread('Data.xlsx','Sheet1','P66:P90');
trend = a + b*N;
xlswrite('komponen trend berdasarkan periode Simulasi
C.xlsx',[trend(:)],'sheet1','A1');
%xlswrite('komponen trend berdasarkan temperatur Simulasi
C.xlsx',[trend(:)],'sheet1','A1');
%xlswrite('komponen trend berdasarkan arah angin Simulasi
C.xlsx',[trend(:)],'sheet1','A1');
fprintf('Nilai komponen trend yaitu %4.2f\n',trend);
x = 6:30;
y = trend;
%y1 = xlsread('RMSE arah angin 2021.xlsx','Sheet2','Q33:Q60');
%plot(datenum(2021,03,x),y,'-r',datenum(2021,03,x),y1,'-b');
stem(datenum(2021,04,x),y,'-r');
title('Komponen Trend Berdasarkan Periode Simulasi C');
xlabel('Tanggal'); ylabel('Nilai Trend');
grid on
datetick('x',1,'keeplimits','keepticks')
```

1.3 Program melakukan *forecasting*

```
KM1 = 0.91; KM2=1.12; KM3=1.00; KM4=1.00;
trend1= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A2');trend2= xlsread('komponen trend berdasarkan
periode Simulasi A.xlsx','Sheet1','A3');
trend3= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A4');trend4= xlsread('komponen trend berdasarkan
periode Simulasi A.xlsx','Sheet1','A5');
trend5= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A6');trend6= xlsread('komponen trend berdasarkan
periode Simulasi A.xlsx','Sheet1','A7');
trend7= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A8');trend8= xlsread('komponen trend berdasarkan
periode Simulasi A.xlsx','Sheet1','A9');
trend9= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A10');trend10= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A11');
trend11= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A12');trend12= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A13');
```



```

trend49= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A50');trend50= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A51');
trend51= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A52');trend52= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A53');
trend53= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A54');trend54= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A55');
trend55= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A56');trend56= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A57');
trend57= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A58');trend58= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A59');
trend59= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A60');trend60= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A61');
trend61= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A62');trend62= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A63');
trend63= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A64');trend64= xlsread('komponen trend
berdasarkan periode Simulasi A.xlsx','Sheet1','A65');
trend65= xlsread('komponen trend berdasarkan periode Simulasi
A.xlsx','Sheet1','A66');
FT1 = KM1*trend1;FT2 = KM2*trend2;FT3 = KM3*trend3;FT4 =
KM4*trend4;
FT5 = KM1*trend5;FT6 = KM2*trend6;FT7 = KM3*trend7;FT8 =
KM4*trend8;
FT9 = KM1*trend9;FT10 = KM2*trend10;FT11 = KM3*trend11;FT12 =
KM4*trend12;
FT13 = KM1*trend13;FT14 = KM2*trend14;FT15 = KM3*trend15;FT16 =
KM4*trend16;
FT17 = KM1*trend17;FT18 = KM2*trend18;FT19 = KM3*trend19;FT20 =
KM4*trend20;
FT21 = KM1*trend21;FT22 = KM2*trend22;FT23 = KM3*trend23;FT24 =
KM4*trend24;
FT25 = KM1*trend25;FT26 = KM2*trend26;FT27 = KM3*trend27;FT28 =
KM4*trend28;
FT29 = KM1*trend29;FT30 = KM2*trend30;FT31 = KM3*trend31;FT32 =
KM4*trend32;
FT33 = KM1*trend33;FT34 = KM2*trend34;FT35 = KM3*trend35;FT36 =
KM4*trend36;
FT37 = KM1*trend37;FT38 = KM2*trend38;FT39 = KM3*trend39;FT40 =
KM4*trend40;
FT41 = KM1*trend41;FT42 = KM2*trend42;FT43 = KM3*trend43;FT44 =
KM4*trend44;
FT45 = KM1*trend45;FT46 = KM2*trend46;FT47 = KM3*trend47;FT48 =
KM4*trend48;
FT49 = KM1*trend49;FT50 = KM2*trend50;FT51 = KM3*trend51;FT52 =
KM4*trend52;
FT53 = KM1*trend53;FT54 = KM2*trend54;FT55 = KM3*trend55;FT56 =
KM4*trend56;
FT57 = KM1*trend57;FT58 = KM2*trend58;FT59 = KM3*trend59;FT60 =
KM4*trend60;

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FT61 = KM1*trend61;FT62 = KM2*trend62;FT63 = KM3*trend63;FT64 =
KM4*trend64;
FT65 = KM1*trend65;
D1 = (1.2*6364.29*(FT1^3))/2000000;D2 =
(1.2*6364.29*(FT2^3))/2000000;
D3 = (1.2*6364.29*(FT3^3))/2000000;D4 =
(1.2*6364.29*(FT4^3))/2000000;
D5 = (1.2*6364.29*(FT5^3))/2000000;D6 =
(1.2*6364.29*(FT6^3))/2000000;
D7 = (1.2*6364.29*(FT7^3))/2000000;D8 =
(1.2*6364.29*(FT8^3))/2000000;
D9 = (1.2*6364.29*(FT9^3))/2000000;D10 =
(1.2*6364.29*(FT10^3))/2000000;
D11 = (1.2*6364.29*(FT11^3))/2000000;D12 =
(1.2*6364.29*(FT12^3))/2000000;
D13 = (1.2*6364.29*(FT13^3))/2000000;D14 =
(1.2*6364.29*(FT14^3))/2000000;
D15 = (1.2*6364.29*(FT15^3))/2000000;D16 =
(1.2*6364.29*(FT16^3))/2000000;
D17 = (1.2*6364.29*(FT17^3))/2000000;D18 =
(1.2*6364.29*(FT18^3))/2000000;
D19 = (1.2*6364.29*(FT19^3))/2000000;D20 =
(1.2*6364.29*(FT20^3))/2000000;
D21 = (1.2*6364.29*(FT21^3))/2000000;D22 =
(1.2*6364.29*(FT22^3))/2000000;
D23 = (1.2*6364.29*(FT23^3))/2000000;D24 =
(1.2*6364.29*(FT24^3))/2000000;
D25 = (1.2*6364.29*(FT25^3))/2000000;D26 =
(1.2*6364.29*(FT26^3))/2000000;
D27 = (1.2*6364.29*(FT27^3))/2000000;D28 =
(1.2*6364.29*(FT28^3))/2000000;
D29 = (1.2*6364.29*(FT29^3))/2000000;D30 =
(1.2*6364.29*(FT30^3))/2000000;
D31 = (1.2*6364.29*(FT31^3))/2000000;D32 =
(1.2*6364.29*(FT32^3))/2000000;
D33 = (1.2*6364.29*(FT33^3))/2000000;D34 =
(1.2*6364.29*(FT34^3))/2000000;
D35 = (1.2*6364.29*(FT35^3))/2000000;D36 =
(1.2*6364.29*(FT36^3))/2000000;
D37 = (1.2*6364.29*(FT37^3))/2000000;D38 =
(1.2*6364.29*(FT38^3))/2000000;
D39 = (1.2*6364.29*(FT39^3))/2000000;D40 =
(1.2*6364.29*(FT40^3))/2000000;
D41 = (1.2*6364.29*(FT41^3))/2000000;D42 =
(1.2*6364.29*(FT42^3))/2000000;
D43 = (1.2*6364.29*(FT43^3))/2000000;D44 =
(1.2*6364.29*(FT44^3))/2000000;
D45 = (1.2*6364.29*(FT45^3))/2000000;D46 =
(1.2*6364.29*(FT46^3))/2000000;
D47 = (1.2*6364.29*(FT47^3))/2000000;D48 =
(1.2*6364.29*(FT48^3))/2000000;
D49 = (1.2*6364.29*(FT49^3))/2000000;D50 =
(1.2*6364.29*(FT50^3))/2000000;
D51 = (1.2*6364.29*(FT51^3))/2000000;D52 =
(1.2*6364.29*(FT52^3))/2000000;

```



```

D53 = (1.2*6364.29*(FT53^3))/2000000;D54 =
(1.2*6364.29*(FT54^3))/2000000;
D55 = (1.2*6364.29*(FT55^3))/2000000;D56 =
(1.2*6364.29*(FT56^3))/2000000;
D57 = (1.2*6364.29*(FT57^3))/2000000;D58 =
(1.2*6364.29*(FT58^3))/2000000;
D59 = (1.2*6364.29*(FT59^3))/2000000;D60 =
(1.2*6364.29*(FT60^3))/2000000;
D61 = (1.2*6364.29*(FT61^3))/2000000;D62 =
(1.2*6364.29*(FT62^3))/2000000;
D63 = (1.2*6364.29*(FT63^3))/2000000;D64 =
(1.2*6364.29*(FT64^3))/2000000;
D65 = (1.2*6364.29*(FT65^3))/2000000;
x = 25:89;ypred= [FT1 FT2 FT3 FT4 FT5 FT6 FT7 FT8 FT9 FT10 FT11
FT12 FT13 FT14 FT15 FT16 FT17 FT18 FT19 FT20 FT21 FT22 FT23 FT24
FT25 FT26 FT27 FT28];
Dpred= [D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D16 D17
D18 D19 D20 D21 D22 D23 D24 D25 D26 D27 D28 D29 D30 D31 D32 D33
D34 D35 D36 D37 D38 D39 D40 D41 D42 D43 D44 D45 D46 D47 D48 D49
D50 D51 D52 D53 D54 D55 D56 D57 D58 D59 D60 D61 D62 D63 D64 D65];
xlswrite('Daya Periode Simulasi A.xlsx',[Dpred(:)],'sheet1','A1');
%xlswrite('Prediksi kecepatan.xlsx',[ypred(:)],'sheet1','A1');
%y= xlsread('RMSE 21.xlsx','Sheet1','S2:S29');
%ypred1 = xlsread('RMSE 21.xlsx','Sheet1','W2:W29');
%rmse = sqrt(mean((ypred1-y).^2));
%fprintf('Nilai RMSE yaitu %d\n',rmse);
Simulasi A
Prediksi daya berdasarkan temperatur
x = 25:89;
y = xlsread('komponen trend berdasarkan temperatur Simulasi
A.xlsx','Sheet1','E2:E66');
%stem(datenum(2021,02,x),y,'-r',datenum(2021,02,x),y1,'-b');
stem(datenum(2021,02,x),y,'-r');
grid on
hold on;
x = 25:89;
y1 = xlsread('komponen trend berdasarkan temperatur Simulasi
A.xlsx','Sheet1','F2:F66');
stem(datenum(2021,02,x),y1,'-b');
title('Prediksi kecepatan angin berdasarkan temperatur Simulasi
A');
xlabel('Tanggal'); ylabel('Kecepatan Angin (m/s)');
grid on
datetick('x',1,'keplimits','kepticks')
Trend= xlsread('Data1.xlsx','Sheet1','M2:M32');%Input komponen
trend
St= xlsread('Data1.xlsx','Sheet1','K2:K32');%Input komponen
musiman
Ft = Trend.*St;
%xlswrite('Data1.xlsx',[Ft(:)],'sheet1','O2');
%A= pi*(57^2);%Dimensi PLTB Sidrap
A= pi*(63^2);%Dimensi PLTB Jeneponto
Daya = (1.2*A*(Ft.^3))/2000000;
%xlswrite('Data1.xlsx',[Daya(:)],'sheet1','P2');
xlswrite('Data1.xlsx',[Daya(:)],'sheet1','Q2');

```

```
y= xlsread('Data1.xlsx','Sheet1','G2:G32');%Input Data validasi
Kecepatan
D= xlsread('Data1.xlsx','Sheet1','I2:I32');%Input Data validasi
Daya
ypred= xlsread('Data1.xlsx','Sheet1','O2:O32');%Input Data
prediksi Kecepatan
Dpred= xlsread('Data1.xlsx','Sheet1','P2:P32');%Input Data
validasi Daya
errors=y-ypred;
mape= mean(abs(errors./y)*100);
```

Lampiran 2 Data BMKG

2.1 Data bulan feburari 2021

ID WMO : 97180

Nama Stasiun : Stasiun Meteorologi Sultan Hasanuddin

Lintang : -5.07000 Bujur : 119.55000

Elevasi : 14

Tanggal	Tn	Tx	Tavg	RH_avg	RR	Ss	ff_x	ddd_x	ff_avg	ddd_car
01-02-2021	22,8	29,9	26,1	90	28	3	3	180	1	E
02-02-2021	23,1	31,7	27,6	85	5,8	1,6	5	320	1	C
03-02-2021	24,6	30,2	25,8	92	0,2	6,8	5	180	1	NE
04-02-2021	24	28	25,2	94	48,6	0,5	3	210	0	C
05-02-2021	23,6	30,6	26,7	88	18,5	0	3	290	1	C
06-02-2021	23,8	31,8	27,2	85	8888	8,9	3	290	1	C
07-02-2021	23	32,2			0	5,5	3	310	1	C
08-02-2021	24	31,8	27,5	84	0	9,1	4	330	1	E
09-02-2021	24,2	32,1	27,9	84	6	10,5	3	240	1	C
10-02-2021	24	31,6	27,5	84	0	8,2	4	330	1	C
11-02-2021	24	33,2	27,9	80	0	9,3	3	310	1	C

12-02-2021	24,6	33	28	81	0	10,7	4	290	2	W
13-02-2021	24,8	29,4	26	90	10,5	5,8	3	220	1	C
14-02-2021	23,6	28	24,6	95	24,5	1,2	4	300	2	NW
15-02-2021	22,6	29,4	24	96	24,7	1,4	3	250	1	C
16-02-2021	23,5	31,2	26,9	86	45,2	2,4	3	300	1	C
17-02-2021	23,8	31,5	27,1	84	0	10,7	4	320	1	E
18-02-2021	24,9	29,8	26,6	92	8,3	7,9	6	320	2	C
19-02-2021	24,2	30,6	26,6	89	20,9	0,6	6	320	2	E
20-02-2021	23,8	27,2	25,1	90	5	2	6	320	1	E
21-02-2021	23,6	30,4	26,3	88	32	0,4	5	200	1	C
22-02-2021	23	28,6	25,4	93	20,4	2,4	5	290	2	E
23-02-2021	23,4	29,6	25,5	92	65,8	0	3	360	1	E
24-02-2021	24	30	25,8	92	26,2	1,5	3	270	1	C
25-02-2021	23,4	31,3	26,8	87	41,4	0,7	2	236	1	C
26-02-2021		31,9	27,1	82	0	4,2	3	220	1	C
27-02-2021	24,2	29	25,4	95	4,7	7,8	5	260	2	E
28-02-2021	23,2	27,4	25,1	91	64,7	0	2	200	1	C

Keterangan :

8888: data tidak terukur

9999: Tidak Ada Data (tidak dilakukan pengukuran)

Tn: Temperatur minimum (°C) Tx: Temperatur maksimum(°C)

Tavg: Temperatur rata-rata (°C)

RR: Curah hujan (mm)

ss: Lamanya penyinaran matahari (jam)

ff_x: Kecepatan angin maksimum (m/s)

ddd_x: Arah angin saat kecepatan maksimum (°)
ff_avg: Kecepatan angin rata-rata (m/s)
ddd_car: Arah angin terbanyak (°)

