```
close all;
% Fenster schließen
clear;
% 'Workspace' saeubern
clc;
% Verlauf im 'Command Window' loeschen

%% Messwerte einlesen

Ferse_KP_M1 = xlsread('Hypothermie.xlsx',1,'C7:D24');
% Messung1 Ferse mit KP(Klimaplatte)
Ferse_KP_M2 = xlsread('Hypothermie.xlsx',1,'F7:G24');
% Messung2 Ferse mit KP(Klimaplatte)
Ferse_KP_M3 = xlsread('Hypothermie.xlsx',1,'I7:J24');
% Messung3 Ferse mit KP(Klimaplatte)
Ferse_KP_M4 = xlsread('Hypothermie.xlsx',1,'L7:M24');
% Messung4 Ferse mit KP(Klimaplatte)

Met1_KP_M1 = xlsread('Hypothermie.xlsx',2,'C7:D24');
% Messung1 Met1 mit KP(Klimaplatte)
Met1_KP_M2 = xlsread('Hypothermie.xlsx',2,'F7:G24');
% Messung2 Met1 mit KP(Klimaplatte)
Met1_KP_M3 = xlsread('Hypothermie.xlsx',2,'I7:J24');
% Messung3 Met1 mit KP(Klimaplatte)
Met1_KP_M4 = xlsread('Hypothermie.xlsx',2,'L7:M24');
% Messung4 Met1 mit KP(Klimaplatte)

Ferse_EP_M1 = xlsread('Hypothermie.xlsx',3,'C7:D24');
% Messung1 Ferse mit EP(Eispack)
Ferse_EP_M2 = xlsread('Hypothermie.xlsx',3,'F7:G24');
% Messung2 Ferse mit EP(Eispack)
Ferse_EP_M3 = xlsread('Hypothermie.xlsx',3,'I7:J24');
% Messung3 Ferse mit EP(Eispack)
Ferse_EP_M4 = xlsread('Hypothermie.xlsx',3,'L7:M24');
% Messung4 Ferse mit EP(Eispack)

Met1_EP_M1 = xlsread('Hypothermie.xlsx',4,'C7:D24');
% Messung1 Met1 mit EP(Eispack)
Met1_EP_M2 = xlsread('Hypothermie.xlsx',4,'F7:G24');
% Messung2 Met1 mit EP(Eispack)
Met1_EP_M3 = xlsread('Hypothermie.xlsx',4,'I7:J24');
% Messung3 Met1 mit EP(Eispack)
Met1_EP_M4 = xlsread('Hypothermie.xlsx',4,'L7:M24');
% Messung4 Met1 mit EP(Eispack)


%% Temperaturdifferenz Post-Prä

Ferse_KP_M1(:,3) = abs(Ferse_KP_M1(:,1)-Ferse_KP_M1(:,2));
Ferse_KP_M2(:,3) = abs(Ferse_KP_M2(:,1)-Ferse_KP_M2(:,2));
Ferse_KP_M3(:,3) = abs(Ferse_KP_M3(:,1)-Ferse_KP_M3(:,2));
Ferse_KP_M4(:,3) = abs(Ferse_KP_M4(:,1)-Ferse_KP_M4(:,2));

Met1_KP_M1(:,3) = abs(Met1_KP_M1(:,1)-Met1_KP_M1(:,2));
Met1_KP_M2(:,3) = abs(Met1_KP_M2(:,1)-Met1_KP_M2(:,2));
Met1_KP_M3(:,3) = abs(Met1_KP_M3(:,1)-Met1_KP_M3(:,2));
Met1_KP_M4(:,3) = abs(Met1_KP_M4(:,1)-Met1_KP_M4(:,2));

Ferse_EP_M1(:,3) = abs(Ferse_EP_M1(:,1)-Ferse_EP_M1(:,2));
Ferse_EP_M2(:,3) = abs(Ferse_EP_M2(:,1)-Ferse_EP_M2(:,2));
```

```
Ferse_EP_M3(:,3) = abs(Ferse_EP_M3(:,1)-Ferse_EP_M3(:,2));
Ferse_EP_M4(:,3) = abs(Ferse_EP_M4(:,1)-Ferse_EP_M4(:,2));

Met1_EP_M1(:,3) = abs(Met1_EP_M1(:,1)-Met1_EP_M1(:,2));
Met1_EP_M2(:,3) = abs(Met1_EP_M2(:,1)-Met1_EP_M2(:,2));
Met1_EP_M3(:,3) = abs(Met1_EP_M3(:,1)-Met1_EP_M3(:,2));
Met1_EP_M4(:,3) = abs(Met1_EP_M4(:,1)-Met1_EP_M4(:,2));

%% Differenz Links-Rechts der Temperaturdeltas

Ferse_dT_M(:,1) = abs(Ferse_KP_M1(:,3)-Ferse_EP_M1(:,3));
Ferse_dT_M(:,2) = abs(Ferse_KP_M2(:,3)-Ferse_EP_M2(:,3));
Ferse_dT_M(:,3) = abs(Ferse_KP_M3(:,3)-Ferse_EP_M3(:,3));
Ferse_dT_M(:,4) = abs(Ferse_KP_M4(:,3)-Ferse_EP_M4(:,3));

Met1_dT_M(:,1) = abs(Met1_KP_M1(:,3)-Met1_EP_M1(:,3));
Met1_dT_M(:,2) = abs(Met1_KP_M2(:,3)-Met1_EP_M2(:,3));
Met1_dT_M(:,3) = abs(Met1_KP_M3(:,3)-Met1_EP_M3(:,3));
Met1_dT_M(:,4) = abs(Met1_KP_M4(:,3)-Met1_EP_M4(:,3));

%% Mittelwerte der Temperaturdifferenz

Ferse_KP_M1(1,4) = mean(Ferse_KP_M1(:,3));
Ferse_KP_M2(1,4) = mean(Ferse_KP_M2(:,3));
Ferse_KP_M3(1,4) = mean(Ferse_KP_M3(:,3));
Ferse_KP_M4(1,4) = mean(Ferse_KP_M4(:,3));

Met1_KP_M1(1,4) = mean(Met1_KP_M1(:,3));
Met1_KP_M2(1,4) = mean(Met1_KP_M2(:,3));
Met1_KP_M3(1,4) = mean(Met1_KP_M3(:,3));
Met1_KP_M4(1,4) = mean(Met1_KP_M4(:,3));

Ferse_EP_M1(1,4) = mean(Ferse_EP_M1(:,3));
Ferse_EP_M2(1,4) = mean(Ferse_EP_M2(:,3));
Ferse_EP_M3(1,4) = mean(Ferse_EP_M3(:,3));
Ferse_EP_M4(1,4) = mean(Ferse_EP_M4(:,3));

Met1_EP_M1(1,4) = mean(Met1_EP_M1(:,3));
Met1_EP_M2(1,4) = mean(Met1_EP_M2(:,3));
Met1_EP_M3(1,4) = mean(Met1_EP_M3(:,3));
Met1_EP_M4(1,4) = mean(Met1_EP_M4(:,3));


%% Standardabweichung

Ferse_KP_M1(2,4) = std(Ferse_KP_M1(:,3));
Ferse_KP_M2(2,4) = std(Ferse_KP_M2(:,3));
Ferse_KP_M3(2,4) = std(Ferse_KP_M3(:,3));
Ferse_KP_M4(2,4) = std(Ferse_KP_M4(:,3));

Met1_KP_M1(2,4) = std(Met1_KP_M1(:,3));
Met1_KP_M2(2,4) = std(Met1_KP_M2(:,3));
Met1_KP_M3(2,4) = std(Met1_KP_M3(:,3));
Met1_KP_M4(2,4) = std(Met1_KP_M4(:,3));

Ferse_EP_M1(2,4) = std(Ferse_EP_M1(:,3));
Ferse_EP_M2(2,4) = std(Ferse_EP_M2(:,3));
Ferse_EP_M3(2,4) = std(Ferse_EP_M3(:,3));
Ferse_EP_M4(2,4) = std(Ferse_EP_M4(:,3));

Met1_EP_M1(2,4) = std(Met1_EP_M1(:,3));
Met1_EP_M2(2,4) = std(Met1_EP_M2(:,3));
Met1_EP_M3(2,4) = std(Met1_EP_M3(:,3));
```

```
Met1_EP_M4(2,4) = std(Met1_EP_M4(:,3));

%% Visualisierung der Daten

%Figure 1, subplot 1
figure(1);
subplot(4,4,1);
bar(Ferse_KP_M1(:,3), 'r');
title('Temperaturdifferenz Prä-Post Ferse KP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,5);
bar(Ferse_KP_M2(:,3), 'r');
title('Temperaturdifferenz Prä-Post Ferse KP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,9);
bar(Ferse_KP_M3(:,3), 'r');
title('Temperaturdifferenz Prä-Post Ferse KP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,13);
bar(Ferse_KP_M4(:,3), 'r');
title('Temperaturdifferenz Prä-Post Ferse KP');
xlabel ('Proband');
ylabel ('K');

%%%%

subplot(4,4,2);
bar(Ferse_EP_M1(:,3), 'r');
title('Temperaturdifferenz Prä-Post Ferse EP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,6);
bar(Ferse_EP_M2(:,3), 'r');
title('Temperaturdifferenz Prä-Post Ferse EP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,10);
bar(Ferse_EP_M3(:,3), 'r');
title('Temperaturdifferenz Prä-Post Ferse EP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,14);
bar(Ferse_EP_M4(:,3), 'r');
title('Temperaturdifferenz Prä-Post Ferse EP');
xlabel ('Proband');
ylabel ('K');

%%%%

subplot(4,4,3);
bar(Met1_KP_M1(:,3), 'r');
title('Temperaturdifferenz Prä-Post Met1 KP');
xlabel ('Proband');
ylabel ('K');
```

```
subplot(4,4,7);
bar(Met1_KP_M2(:,3), 'r');
title('Temperaturdifferenz Prä-Post Met1 KP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,11);
bar(Met1_KP_M3(:,3), 'r');
title('Temperaturdifferenz Prä-Post Met1 KP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,15);
bar(Met1_KP_M4(:,3), 'r');
title('Temperaturdifferenz Prä-Post Met1 KP');
xlabel ('Proband');
ylabel ('K');

%%%%

subplot(4,4,4);
bar(Met1_EP_M1(:,3), 'r');
title('Temperaturdifferenz Prä-Post Met1 EP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,8);
bar(Met1_EP_M2(:,3), 'r');
title('Temperaturdifferenz Prä-Post Met1 EP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,12);
bar(Met1_EP_M3(:,3), 'r');
title('Temperaturdifferenz Prä-Post Met1 EP');
xlabel ('Proband');
ylabel ('K');

subplot(4,4,16);
bar(Met1_EP_M4(:,3), 'r');
title('Temperaturdifferenz Prä-Post Met1 EP');
xlabel ('Proband');
ylabel ('K');

%%%%

% Figure 2, subplot 2
figure(2);
subplot(4,2,1);
bar(Ferse_dT_M(:,1),'r');
title('Differenz Links-Rechts Ferse M1');
xlabel ('Proband');
ylabel ('K');

subplot(4,2,3);
bar(Ferse_dT_M(:,2),'r');
title('Differenz Links-Rechts Ferse M2');
xlabel ('Proband');
ylabel ('K');

subplot(4,2,5);
bar(Ferse_dT_M(:,3),'r');
```

```
title('Differenz Links-Rechts Ferse M3');
xlabel ('Proband');
ylabel ('K');

subplot(4,2,7);
bar(Ferse_dT_M(:,4),'r');
title('Differenz Links-Rechts Ferse M3');
xlabel ('Proband');
ylabel ('K');

subplot(4,2,2);
bar(Met1_dT_M(:,1),'r');
title('Differenz Links-Rechts Met1 M1');
xlabel ('Proband');
ylabel ('K');

subplot(4,2,4);
bar(Met1_dT_M(:,2),'r');
title('Differenz Links-Rechts Met1 M2');
xlabel ('Proband');
ylabel ('K');

subplot(4,2,6);
bar(Met1_dT_M(:,3),'r');
title('Differenz Links-Rechts Met1 M3');
xlabel ('Proband');
ylabel ('K');

subplot(4,2,8);
bar(Met1_dT_M(:,4),'r');
title('Differenz Links-Rechts Met1 M3');
xlabel ('Proband');
ylabel ('K');
```