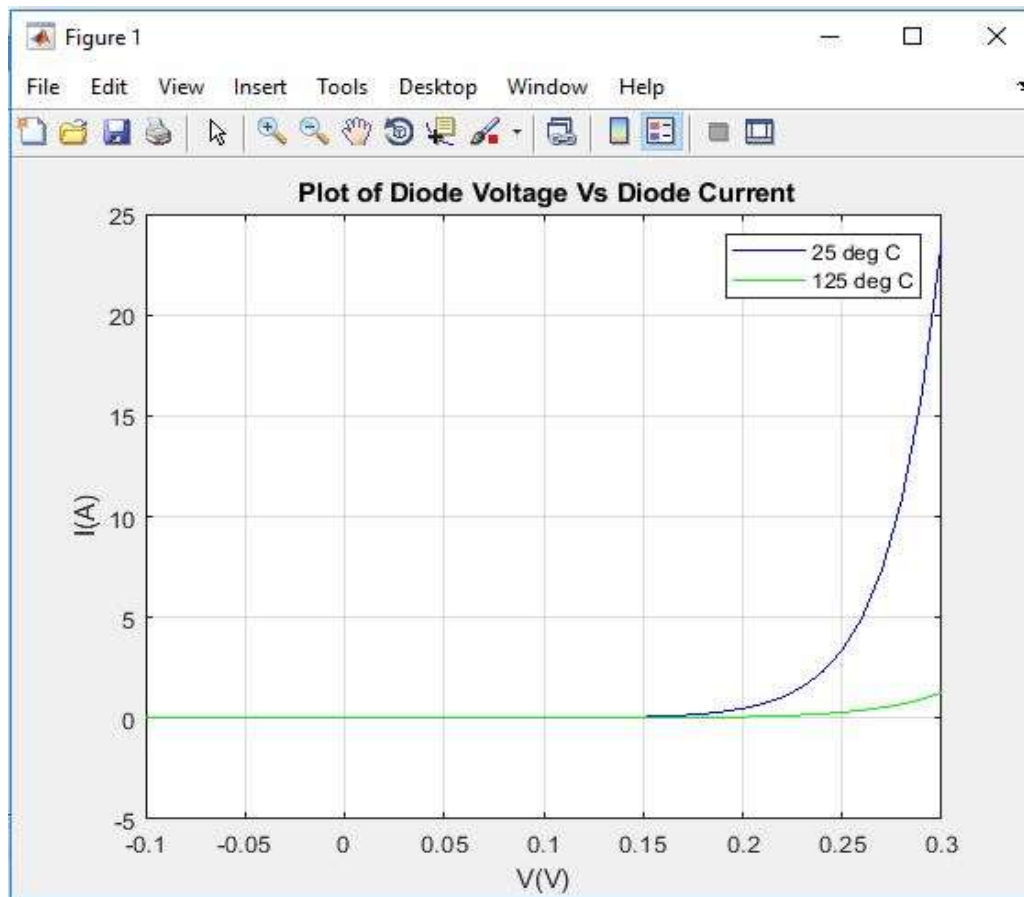| Name	Umar Hayyat
Roll No	2019-EE-360

Assignment 2

Code

```
k=1.38e-23;
Vd=-0.1:0.01:0.30;
q=1.602e-19;
t_C=[25 125];
for ii=1:length(t_C)
    t_K=t_C(ii)+273.15;
    id=i0.*(exp((q*Vd)/(k*t_K))-1);
    if ii==1
        plot(Vd,id,'b');
        hold on
    elseif ii==2
        plot(Vd,id,'g');
        hold off;
    end
end
legend('25 deg C','125 deg C')
grid on;
title('\bf Plot of Diode Voltage Vs Diode Current')
xlabel('V(V)');
ylabel('I(A)');
```

Output

Plot of Diode Voltage Vs Diode Current

Matlab


```
k=1.38e-23;
Vd=-0.1:0.01:0.30;
q=1.602e-19;
t_C=[25 125];
for ii=1:length(t_C)
    t_K=t_C(ii)+273.15;
    id=i0.*(exp((q*Vd)/(k*t_K))-1);
    if ii==1
        plot(Vd,id,'b');
        hold on
    elseif ii==2
        plot(Vd,id,'g');
        hold off;
    end
end
legend('25 deg C','125 deg C')
grid on;
title('\bf Plot of Diode Voltage Vs
xlabel('V(V)');
ylabel('I(A)');
```