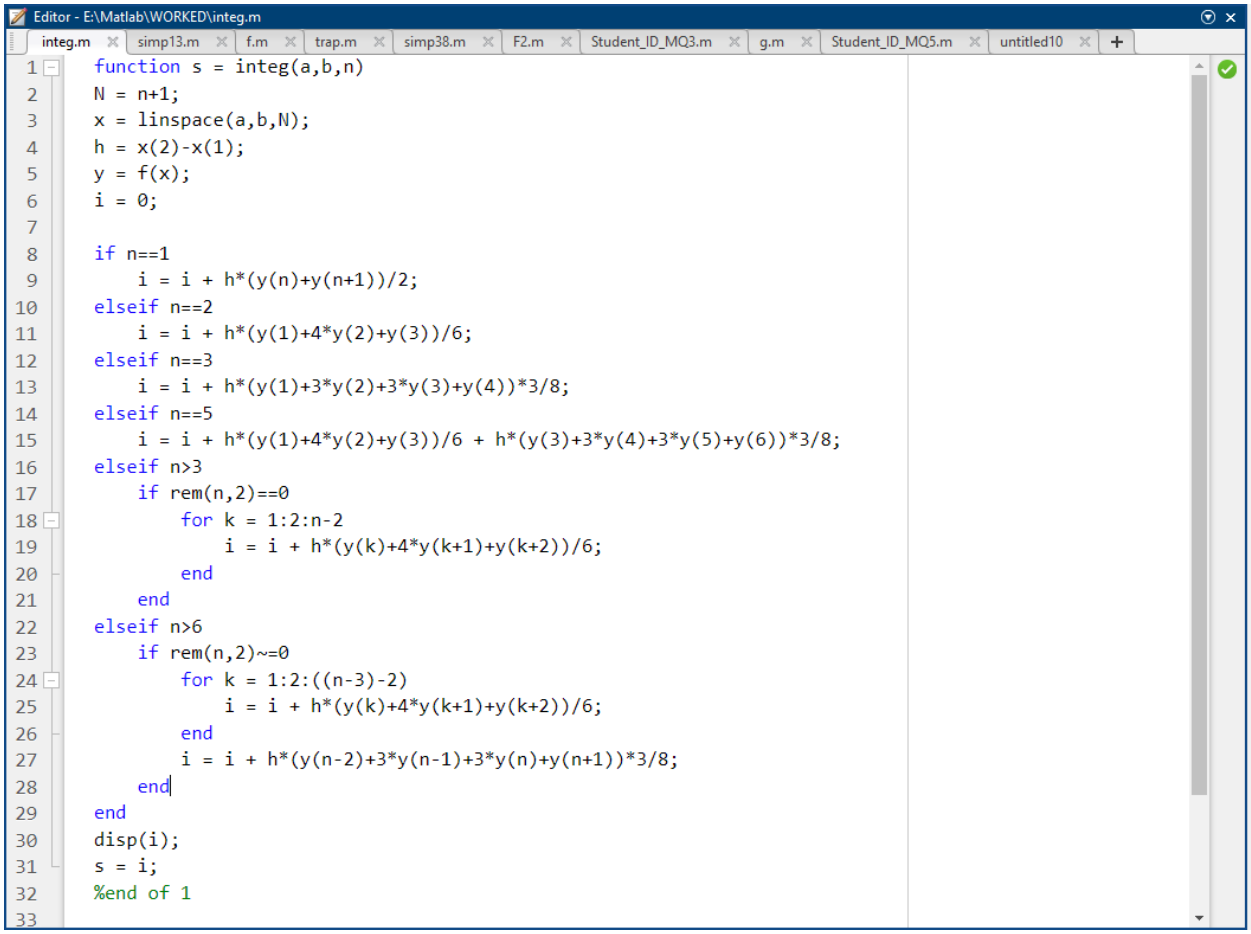
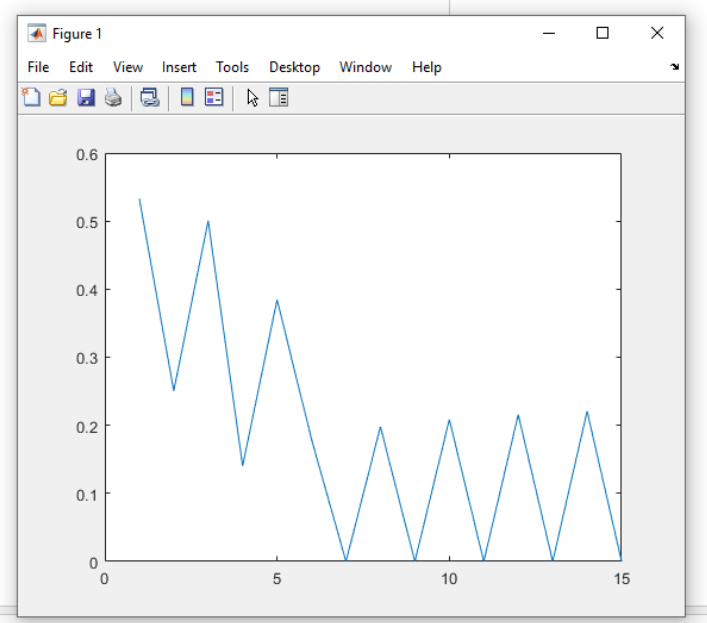

Editor - E:\Matlab\WORKED\integ.m
integ.m
simp13.m
f.m
trap.m
simp38.m
F2.m
Student_ID_MQ3.m
g.m
Student_ID_MQ5.m
untitled10
function s = integ(a,b,n)
N = n+1;
x = linspace(a,b,N);
h = x(2)-x(1);
y = f(x);
i = 0;
if n==1
i = i + h*(y(n)+y(n+1))/2;
elseif n==2
i = i + h*(y(1)+4*y(2)+y(3))/6;
elseif n==3
i = i + h*(y(1)+3*y(2)+3*y(3)+y(4))*3/8;
elseif n==5
i = i + h*(y(1)+4*y(2)+y(3))/6 + h*(y(3)+3*y(4)+3*y(5)+y(6))*3/8;
elseif n>3
if rem(n,2)==0
for k = 1:2:n-2
i = i + h*(y(k)+4*y(k+1)+y(k+2))/6;
end
end
elseif n>6
if rem(n,2)~=0
for k = 1:2:((n-3)-2)
i = i + h*(y(k)+4*y(k+1)+y(k+2))/6;
end
i = i + h*(y(n-2)+3*y(n-1)+3*y(n)+y(n+1))*3/8;
end
end
disp(i);
s = i;
%end of 1

Editor - E:\Matlab\WORKED\Student_ID_MQ3.m

integ.m | simp13.m | f.m | trap.m | simp38.m | F2.m | Student_ID_MQ3.m | g.m | Student_ID_MQ5.m | untitled10

```
1  inte = zeros(1,15);
2  j = 1:15;
3  for i = 1:15
4      inte(i) = integ(0, 2, i);
5  end
6  plot(j, inte);
7
8
```



Command Window

```
    0.2086

     0

    0.2157

     0

    0.2207

     0

fx >>
```

Editor - E:\Matlab\WORKED\Student_ID_MQ5.m

Student_ID_MQ5.m | f.m | Student_ID_MQ6.m | untitled5

```
h = 0.25;
t = 0:h:10;
N = 10/h;
y = zeros(N+1,1);
y(1) = 100;
k = zeros(4,1);


for j=1:N %finding values of Ks for each x,y
    k(1)=f(t(j), y(j));
    k(2)=f(t(j)+1/2*h, y(j)+1/2*h*k(1));
    k(3)=f(t(j)+1/2*h, y(j)+1/2*h*k(2));
    k(4)=f(t(j)+h, y(j)+h*k(3));
    y(j+1)=y(j)+(h/6)*(k(1)+2*k(2)+2*k(3)+k(4));
end

disp(y);
plot(t, y);
```

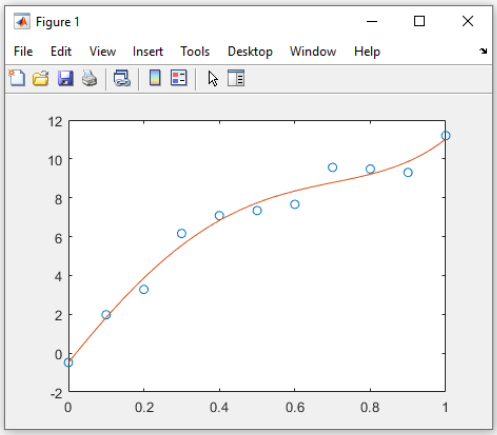
Command Window

```
  1.0e+03 *

    0.1000
    0.0893
    0.0801
    0.0722
    0.0656
    0.0602
    0.0560
    0.0529
    0.0509
    0.0501
    0.0505
    0.0523
    0.0555
    0.0605
    0.0674
    0.0767
    0.0886
    0.1038
    0.1228
    0.1466
    0.1760
    0.2122
    0.2568
    0.3116
    0.3787
    0.4609
    0.5615
    0.6846
    0.8350
    1.0189
    1.2436
    1.5182
    1.8536
    2.2634
    2.7640
    3.3755
    4.1224
    5.0348
    6.1492
    7.5103
    9.1729

fx >>
```

Editor - E:\Matlab\WORKED\Student_ID_MQ6.m

Student_ID_MQ5.m | f.m | Student_ID_MQ6.m | untitled5

```
1  function [a] = Student_ID_MQ6
2  x = 0:0.1:1;
3  y = [-0.48 1.978 3.28 6.16 7.08 7.34 7.66 9.56 9.48 9.3 11.2];
4  i = 4;
5  a = polyfit(x,y,i);
6  xp = linspace(min(x), max(x));
7  yp = 0;
8  for k = 1:i+1
9      yp = yp + a(k)*xp.^(i+1 -k);
10 end
11 plot(x, y, 'o');
12 hold on
13 plot(xp, yp);
14 hold on
15
```



Command Window

```
    0.0505
    0.0523
    0.0555
    0.0605
    0.0674
    0.0767
    0.0886
    0.1038
    0.1228
    0.1466
    0.1760
    0.2122
    0.2568
    0.3116
    0.3787
    0.4609
    0.5615
    0.6846
    0.8350
    1.0189
    1.2436
    1.5182
    1.8536
    2.2634
    2.7640
    3.3755
    4.1224
    5.0348
    6.1492
    7.5103
    9.1729

>> Student_ID_MQ6

ans =

  Columns 1 through 4

   21.4802  -26.6923   -7.4204   24.1373

  Column 5

   -0.4818

>>
```