```
% Name:Mokshada Pravin Toke
% Roll no:72
% Div :TY-B
% RK-2 Method
f=input('Enter the function of y=f(x,y)=');
x0=input('Enter the initial value of x0=');
y0=input('Enter the initial value of y0=');
xg=input('Enter the given value of xg=');
h=input('Enter the value of step size h=');
n=(xg-x0)/h;
for i=1:n
    k1=h*f(x0,y0);
    k2=h*f(x0+h,y0+k1);
    k=(k1+k2)/2;
    yg=y0+k;
    x0=x0+h;
    y0=yg;
end
fprintf('The final value of yg=%f',yg);
```

Output

```
> rk272
Enter the function of y=f(x,y)=
@(x,y) (x+y)
Enter the initial value of x0=
0
Enter the initial value of y0=
1
Enter the given value of xg=
0.2
Enter the value of step size h=
0.1
The final value of yg=1.242050
```