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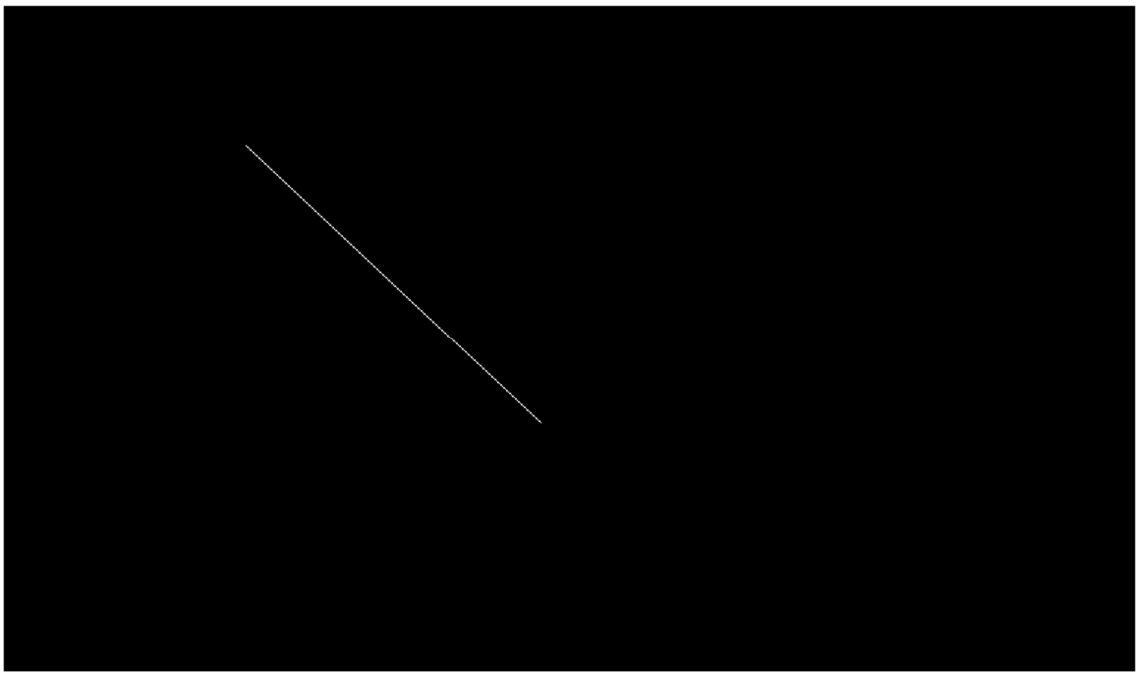
Lab 1

Write a program to draw a line using an algorithm

```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
#include<dos.h>
#include<math.h>
int abs(int n){return ((n>0)? n:(n*(-1)));}
void drawline(int x1, int y1, int x2,int y2){
 int dx=x2-x1;
 int dy=y2-y1;
 int steps=(abs(dx)>abs(dy))? abs(dx):abs(dy);
 float xI=(float)dx/steps;
 float yI=(float)dy/steps;
 float x=x1;
 float y=y1;
 int gd=DETECT,gm;
 initgraph(&gd,&gm,"C://TURBOC3//BGI");
 putpixel(x,y,WHITE);

 for(int i=1;i<=steps;i++){
  x+=xI;
  y+=yI;
```

```
  putpixel(x,y,WHITE);
 }
 getch();
}
int main(void)  {
  int x1=100 ,y1=100 ,x2=300 ,y2=300;

  drawline(x1,y1,x2,y2);
  return 0;
}
```

Output



Lab 2

Write a program to draw a circle using an algorithm

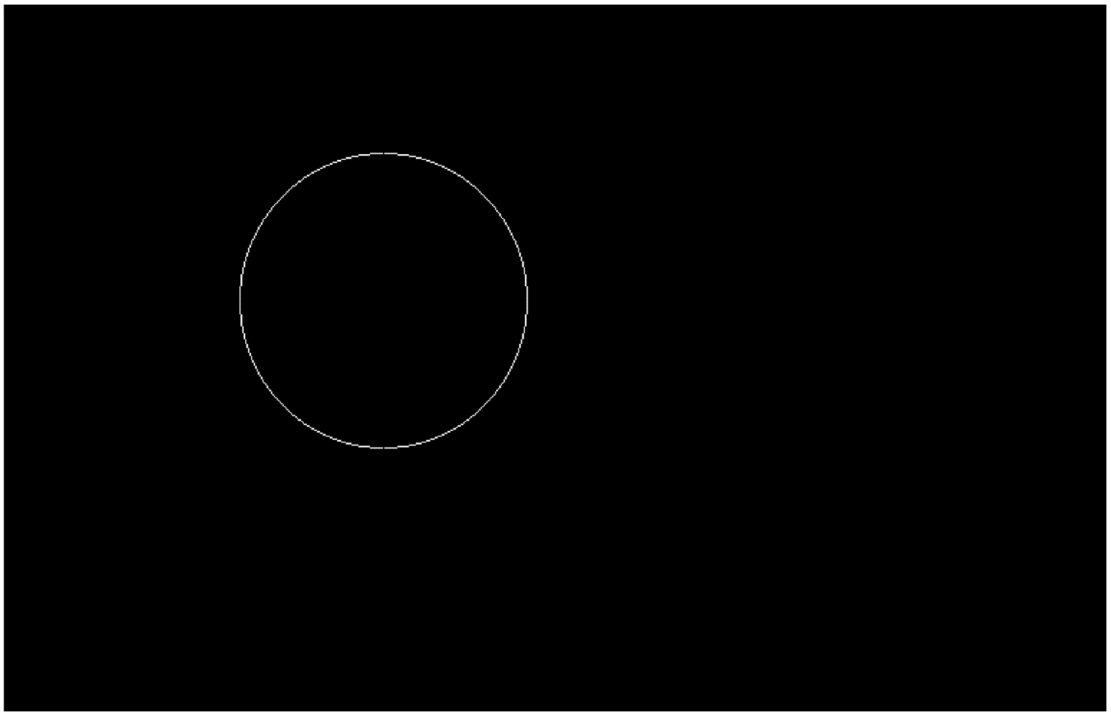
```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
void drawcircle(int xc,int yc,int r)
{
 int x=r;
 int y=0;
 int dx=1;
 int dy=1;
 int D=2*dx-r;
 int gd=DETECT,gm;
 initgraph(&gd,&gm,"C://TURBOC3//BGI");
 putpixel(xc+x,yc-y,WHITE);

 if(r>0){
   putpixel(xc-x,yc+y,WHITE);
   putpixel(xc+x,yc+y,WHITE);
   putpixel(xc-x,yc-y,WHITE);
 }
 while(y<x){
  y++;
  if(D<=0){
```

```
  D=D+2*y+1;
 }
 else{
  x--;
  D=D+2*(y-x)+1;
 }

 if(x<y){
  break;
 }
  putpixel(xc+x,yc-y,WHITE);
  putpixel(xc-x,yc-y,WHITE);
  putpixel(xc+x,yc+y,WHITE);
  putpixel(xc-x,yc+y,WHITE);

 if(x!=y){
  putpixel(xc+y,yc-x,WHITE);
  putpixel(xc-y,yc-x,WHITE);
  putpixel(xc+y,yc+x,WHITE);
  putpixel(xc-y,yc+x,WHITE);
 }
}

 D=2*r-1;
```

```
while(y>=0)
{
 y--;

 if(D>0){
  x--;
  D=D+2*(x-y)+1;
 }
 else{
   D=D+2*x+1;
 }
 if(x<y){
  break;
 }

putpixel(xc+x,yc-y,WHITE);
putpixel(xc-x,yc-y,WHITE);
putpixel(xc+x,yc+y,WHITE);
putpixel(xc-x,yc+y,WHITE);

if(x!=y){
 putpixel(xc+y,yc-x,WHITE);
 putpixel(xc-y,yc-x,WHITE);
 putpixel(xc+y,yc+x,WHITE);
```

```
    putpixel(xc-y,yc+x,WHITE);
   }
 }
 getch();
 closegraph();
}
int main(void)
{
  int xc,yc,r;
  printf("Enter the center coordinates:");
  scanf("%d%d",&xc,&yc);

  printf("Enter the radius of the circle:");
  scanf("%d",&r);
  drawcircle(xc,yc,r);
  return 0;
}
```

Output



Lab 3

#Write a program to perform point clipping

```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
int tx,ty,bx,by,px,py;
void point_clip()
{
int wxmin,wxmax,wymin,wymax;
wxmin=tx;
wxmax=bx;
wymin=ty;
wymax=by;
if(px>=wxmin&&px<=wxmax)
if(py>=wymin&&py<=wymax)
putpixel(px,py,WHITE);
getch();
closegraph();
}
void main()
{
int gd=DETECT,gm,xc,yc,r;
clrscr();
printf("Enter the top left coordinate:");
```

```
scanf("%d%d",&tx,&ty);
printf("Enter the bottom right coordinate:");
scanf("%d%d",&bx,&by);
printf("\nEnter the point:");
scanf("%d%d",&px,&py);
initgraph(&gd,&gm,"C:/TURBOC3/BGI");
setbkcolor(BLACK);
setcolor(WHITE);
rectangle(tx,ty,bx,by);
point_clip();
}
```

Output

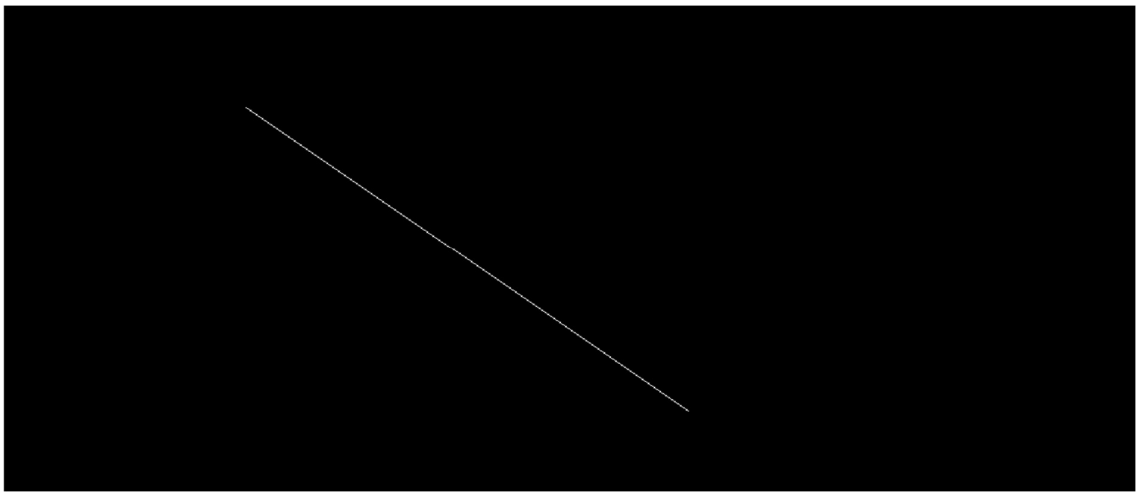
Lab 4

#Write a program to draw a line & a circle using in-built functions

1. Line drawing:

```
#include <graphics.h>
#include <stdlib.h>
#include <stdio.h>
#include <conio.h>
int main(void)
{
   int gdriver = DETECT, gmode;
   int xmax, ymax;
  initgraph(&gdriver, &gmode, "C://TURBOC3//BGI");
   line(100,100, 400, 400);
   getch();
   closegraph();
   return 0;
}
```

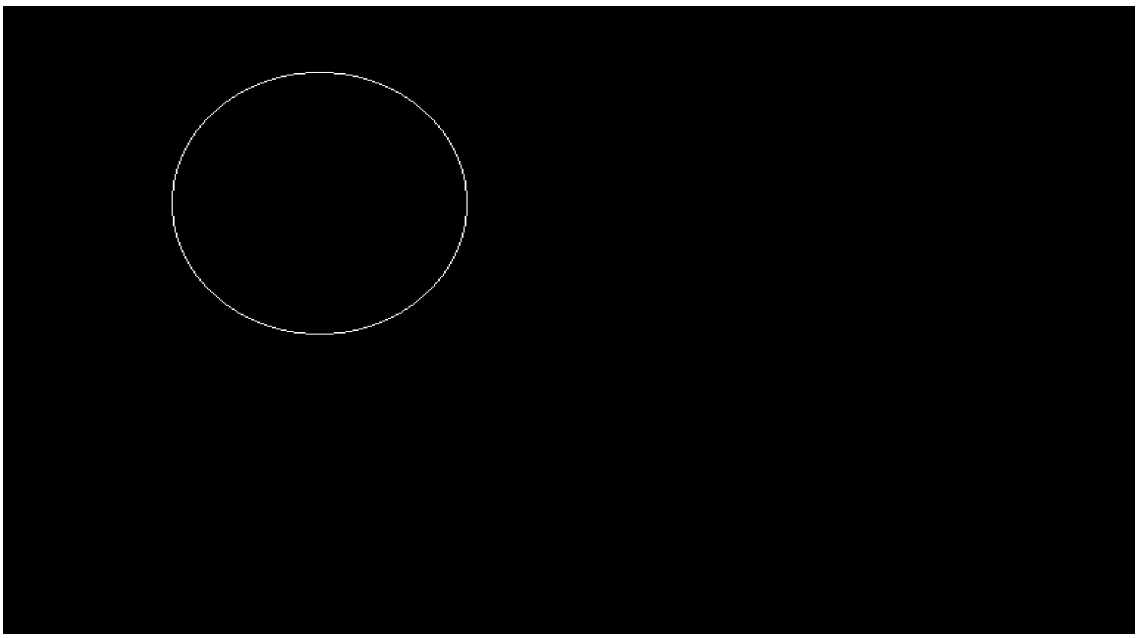
Output



2. Circle drawing:

```
#include <graphics.h>
#include <stdlib.h>
#include <stdio.h>
#include <conio.h>
int main(void)
{
  int gdriver = DETECT, gmode;
  int midx=150;
  int midy=150;
  int radius = 100;
  initgraph(&gdriver, &gmode, "C://TURBOC3//BGI");

  circle(midx, midy, radius);

  getch();
  closegraph();
  return 0;
}
```

Output

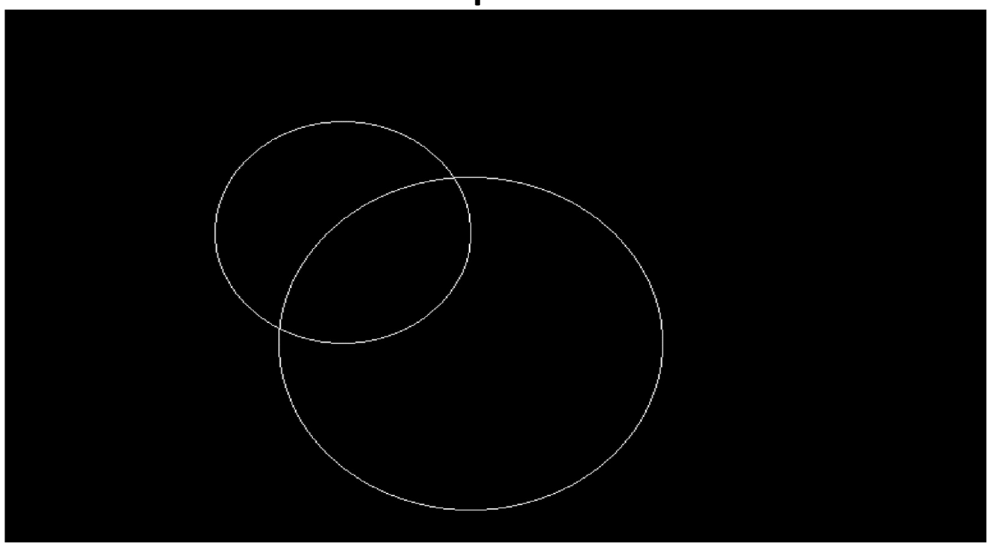


Lab 5

#Write a program to animate a circle

```
#include <stdio.h>
#include <conio.h>
#include<dos.h>
int main(void)
{
  int gdriver = DETECT, gmode;
  int midx, midy;
  int radius = 100;
  initgraph(&gdriver, &gmode, "C:/TURBOC3/BGI");
  circle(200,200,100);
  delay(200);
  circle(300,300,150);
  getch();
  closegraph();
  return 0;
}
```

Output

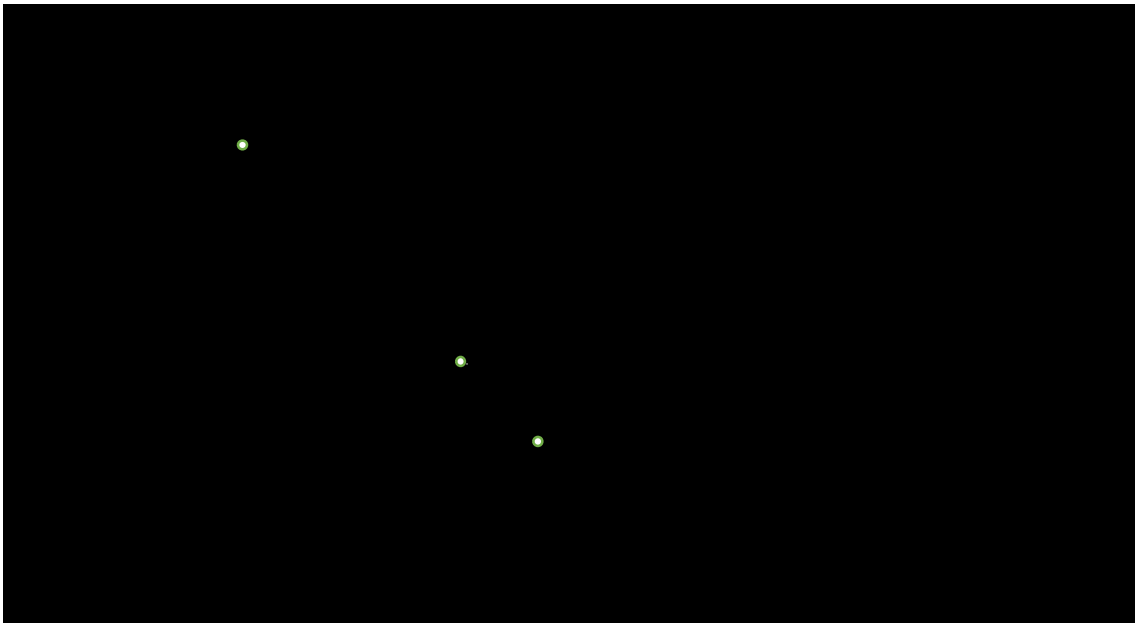


Lab 6

#Write a program to plot points in a graph

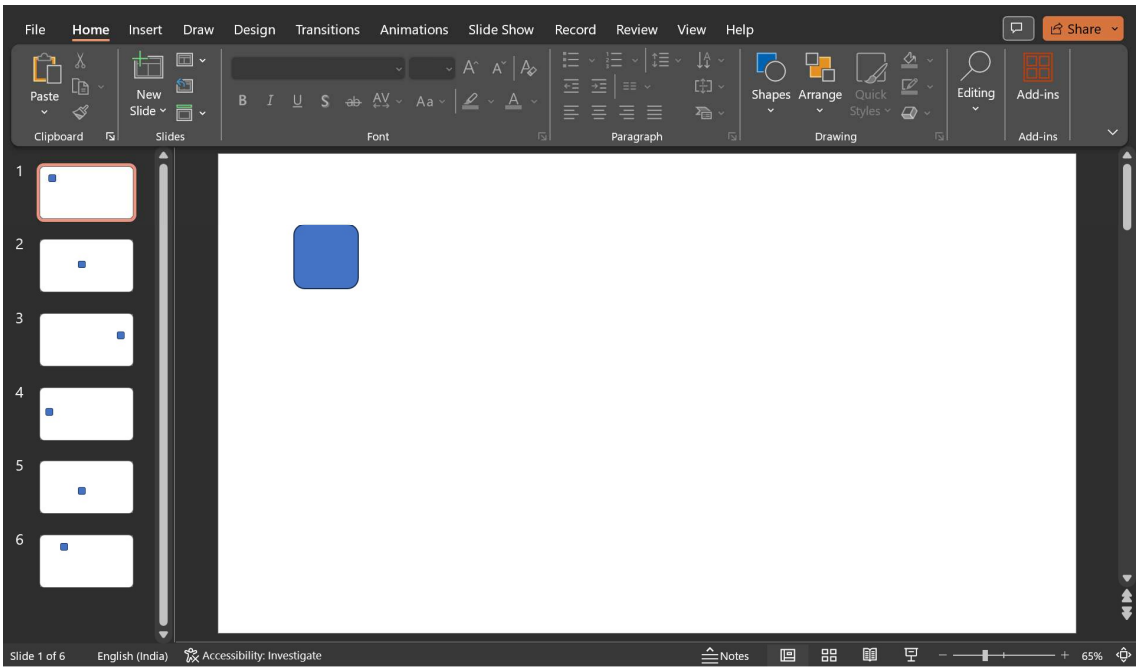
```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
int main()
{
 int gd=DETECT,gm;
 initgraph(&gd,&gm,"C://TURBOC3//BGI");
 putpixel(100,100,WHITE);
 putpixel(250,250,WHITE);
 putpixel(300,300,WHITE);
 getch();
 closegraph();
 return 0;
}
```

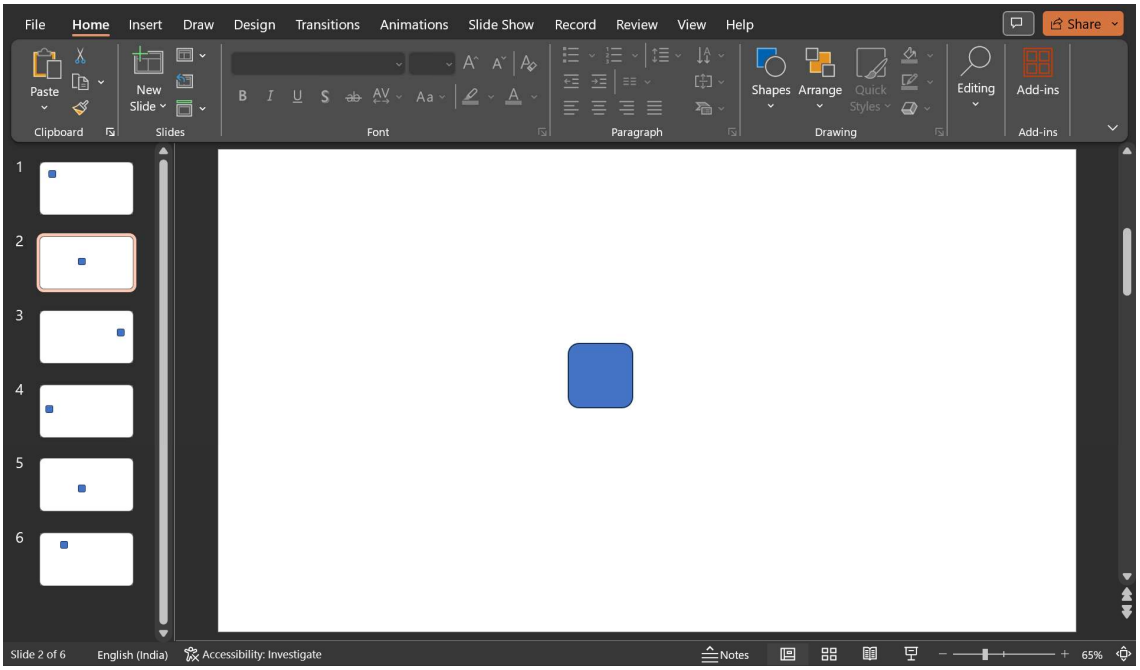
Output

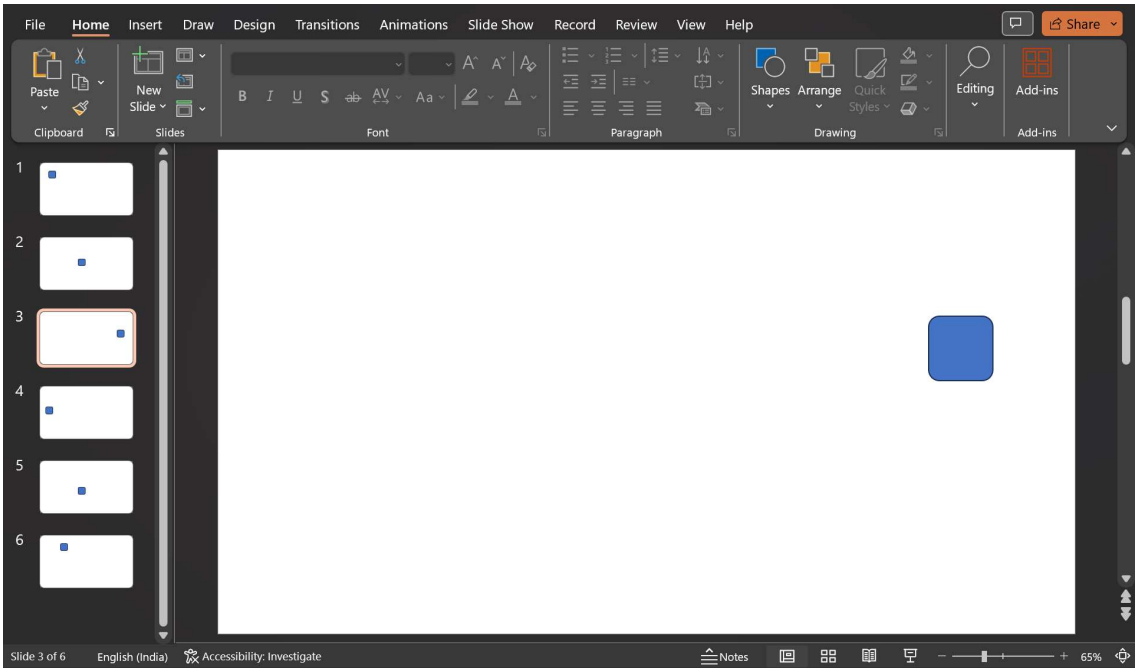


Lab 7

#Perform animation using PowerPoint presentation



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Add-ins
Slide 3 of 6
English (India)
Accessibility: Investigate
Notes
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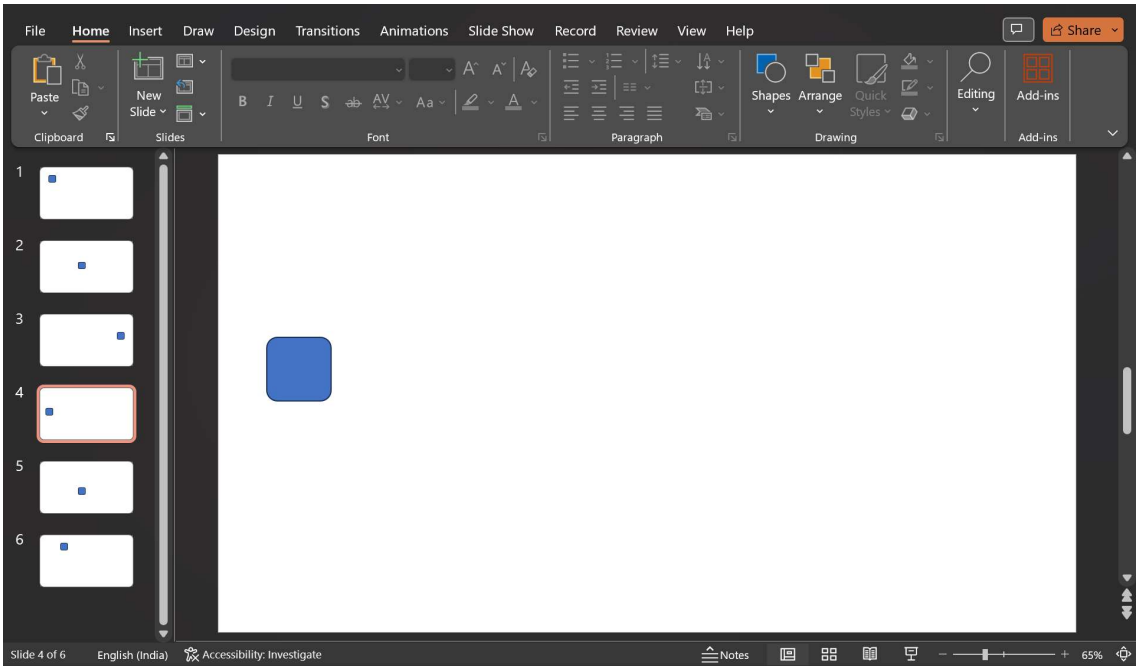
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Slide 4 of 6
English (India)
Accessibility: Investigate
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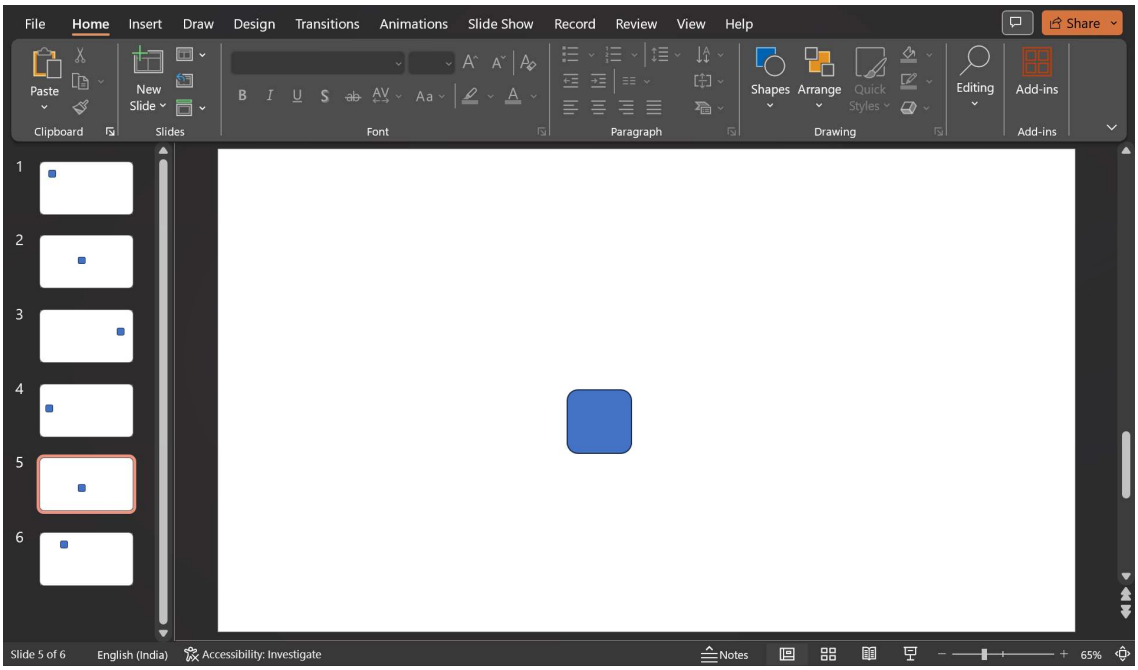
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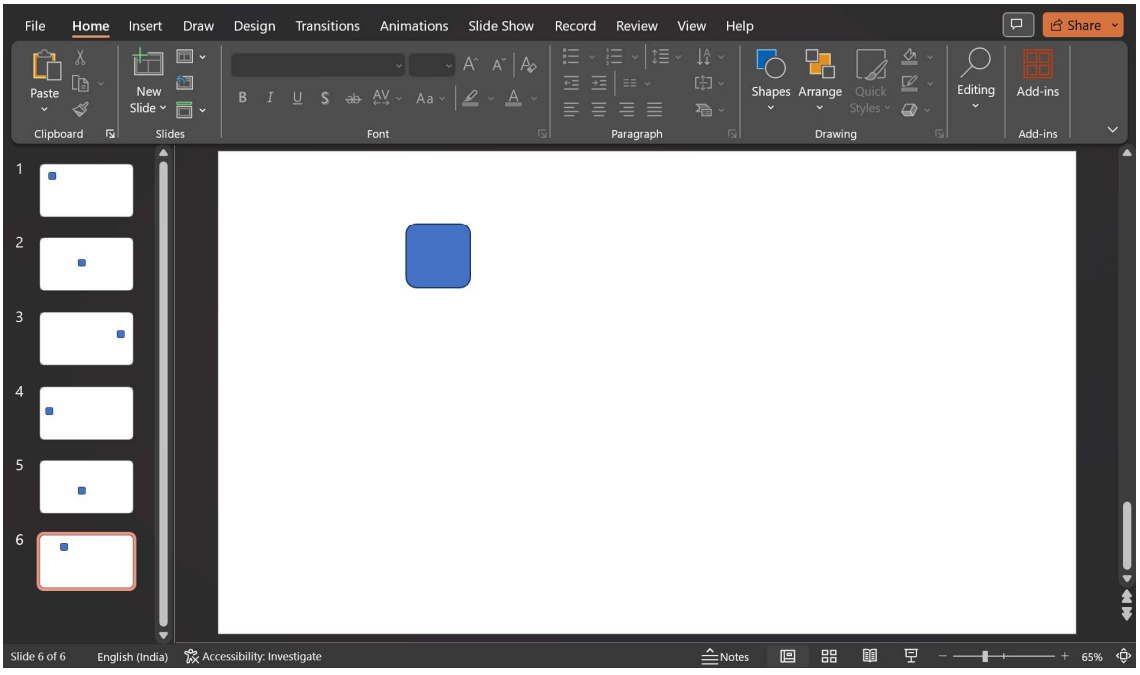
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