Slope intercept form is y=mx+b, where m is slope and b is the y-intercept. We can use this form of a linear equation to draw the graph of that equation on the x-y coordinate plane.
It is the simplest form of conversion. First of all scan P1 and P2 points. P1 has co-ordinates (x1',y1') and (x2' y2').

Then m = (y2',y1')/(x2',x1') and b =

If value of |m|≤1 for each integer value of x. But do not consider

If value of |m|>1 for each integer value of y. But do not consider
Example: A line with starting point as (0, 0) and ending point (6, 18) is given. Calculate value of intermediate points and slope of line.
Solution: P1 (0,0) P7 (6,18)

x1=0
y1=0
x2=6
y2=18

M= delta y / delta x = y2-y1/x2-x1 = 18 - 0 / 6 - 0 = 3
We know equation of line is

y =m x + b
y = 3x + b.....equation (1)

put value of x from initial point in equation (1), i.e., (0, 0) x =0, y=0

0 = 3 x 0 + b
0 = b ⟹ b=0

put b = 0 in equation (1)

y = 3x + 0
y = 3x

Now calculate intermediate points

Let x = 1 ⟹ y = 3 x 1 ⟹ y = 3
Let x = 2 ⟹ y = 3 x 2 ⟹ y = 6
Let x = 3 ⟹ y = 3 x 3 ⟹ y = 9
Let x = 4 ⟹ y = 3 x 4 ⟹ y = 12
Let x = 5 ⟹ y = 3 x 5 ⟹ y = 15
Let x = 6 ⟹ y = 3 x 6 ⟹ y = 18

So points are P1 (0,0)

P2 (1,3)
P3 (2,6)
P4 (3,9)
P5 (4,12)
P6 (5,15)
P7 (6,18)

Program

```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
#include<math.h>
void main()
{
float m,x1,y1,x2,y2;
int x,y;
int gdriver=DETECT,gmode,gerror;
clrscr();
printf(" PROGRAM FOR THE LINE INTERCEPT \n");
printf(" Enter the value of x1");
scanf("%f",&x1);
printf(" Enter the value of y1");
scanf("%f",&y1);
printf(" Enter the value of x2");
scanf("%f",&x2);
printf(" Enter the value of y2");
scanf("%f",&y2);
initgraph(&gdriver,&gmode,"c:\\turboc3\\bgi");
m=(y2-y1)/(x2-x1);
for(x=1;x<=x2;x++)
{
y=m*(x-x1)+y1;
putpixel(x,y,15);
delay(50);
}
getch();
closegraph();
}
```

Output