Assignment-07

Man walking in the rain with umbrella

```
#include<iostream>
#include<graphics.h>
#include<stdlib.h>
using namespace std;

class WalkingMan{
int rhx,rhy;
public:
void draw(int,int); // rain
void draw(int); // walking man
};
void WalkingMan::draw(int i){
line(20,380,580,380); //platform

if(i%2==0)
{
line(25+i,380,35+i,340); //leftleg
```

```
line(45+i,380,35+i,340);//right leg
line(35+i,310,25+i,330);//left hand
delay(20);
}
else
{
line(35+i,380,35+i,340);
line(35+i,310,40+i,330);
delay(20);
}

line(35+i,340,35+i,310); //body
circle(35+i,300,10); //head
line(35+i,310,50+i,330); // hand
line(50+i,330,50+i,280); //umbrella
stick
line(15+i,280,85+i,280); //umbrella
right
arc(50+i,280,180,360,35); //umbrella
body
```

```cpp
arc(55+i,330,0,180,5);//umbrella handle
arc(x, y, start_angle, end_angle, radius);
}
void WalkingMan::draw(int x, int y){
int j;
rhx=x;
rhy=y;
for(j=0;j<100;j++)
{
outtextxy(rand()%rhx,rand()%(rhy-50),"|");

setcolor(WHITE);
}
}
int main()
{
int gd=DETECT,gm;
int rhx,rhy,j,i;
```

```
WalkingMan obj;

initgraph(&gd,&gm,NULL);
for(i=0;i<500;i+=5)
{
obj.draw(i);
rhx=getmaxx();
rhy=getmaxy();
obj.draw(rhx,rhy);
delay(150);
cleardevice();
}
getch();
}
```

Explanation of the "Man Walking in the Rain with Umbrella" Program

This C++ program uses the graphics library to create a simple
animation of a man walking while holding an umbrella in the rain. It
employs object-oriented programming principles by defining a

WalkingMan class that encapsulates the drawing functionality of both the man and the rain.

Key Components of the Code

1.Class Definition:

•The WalkingMan class contains two overloaded draw methods:

•void draw(int, int): Draws falling rain.

•void draw(int): Draws the walking man.

2.Drawing the Walking Man:

•The draw(int i) method draws the walking man. It alternates between two leg positions based on the value of i:

•Legs: Draws the left and right legs.

•Body and Head: Draws the body and head of the man.

•Umbrella: Draws the umbrella above the man using a combination of lines and arcs.

•The delay(20) function adds a small pause between frames, creating a smoother animation effect.

3.Drawing Rain:

•The draw(int x, int y) method randomly generates vertical lines to represent raindrops, simulating rain falling from random horizontal positions.

4.Main Function:

•Initializes the graphics mode.

•Uses a loop to animate the man walking across the screen by calling the draw(i) method to update the man's position.

•Calls the draw(rhx, rhy) method to draw the rain.

•After drawing each frame, it clears the device to prepare for the next frame using cleardevice().