**PROJECT REPORT**

**ON**

Moving Boat in River



## PANJAB UNIVERSITY CHANDIGARH

**In the partial fulfilment of the Requirement for the Degree**

**MASTER OF SCIENCE IN INFORMATION TECHNOLOGY (3nd SEMESTER)**

**Submitted To:- Submitted By:-**

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**Devki Devi Jain Memorial College For Women, Ludhiana.**

# ACKNOWLEDGEMENT

*“Outstanding Achievements are not possible in Vacuums. It needs a lot of Help Assistance beside a Healthy Environment.”*

No work of significance can be claimed on a result of an individual’s efforts and some hold true for this project as well. Through it carries my name, but the energy of many has been contributed in no small measures in completion of this project.

We would like to thanks “**MR. HITESH AHUJA**” Head of Department for providing all the equipment’s and material required.

We are thankful to our project guide “**Ms. Priya Sharma**”. It is only through their efforts, constant encouragement and guidance that this has been accomplished.

We are thankful to all professors of project committee and staff of department of computer science, Devki Devi Jain Memorial College For Women, Ludhiana who helped us to do our projects by providing us various facility and guidance to complete this project.

# PREFACE

Man has invented many electronic devices but the computer has made a significant impact on the society than any other devices. They have made a potentially significant contribution to the society during the last three decades. The area of Computer applications are literally too numerous to mention.

Computers have become an integral part of man’s everyday life. They dominate every sphere of life by its entertainment education, banking, insurance, research, medicine, design or manufacturing services. They continue to grow and open new horizons of discovery and applications. Our project is to the part of fast growing process and will be a milestone in the words of computer.

# CERTIFICATE

This is to certify that the project entitled **“Moving Boat in River”** developed by **Manpreet Kaur (M.sc IT 3rd Semester)** at Devki Devi Jain College for Women, affiliated to Panjab University, Chandigarh is an Original Work and has not been submitted earlier whether to Panjab University or to any other institution for fulfillment of a course of study.

**Project Topic:-**

**Boat**

**Project & Performance:-**

**------------------------**

**Mr. Hitesh Ahuja**

(H.O.D)

Computer Science Department

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**Ms. Priya Sharma**

Internal Guide

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**INTRODUCTION OF**

**COMPUTER GRAPHICS**

Computer graphics refers to a technology that generates images on a computer screen. It’s used in digital photography, film and television, video games, and on electronic devices and is responsible for displaying images effectively to users. Think of computer graphics as the intersection of design and computer science, with the purpose of delighting and engaging audiences.

You can find examples of computer graphics in action all around you. Some examples include blockbuster films, such as the 2009 film *Avatar*, which depicts the species using facial motion capture technologies, images and icons you see on your smartphone when you open mobile applications, and data presentations like charts and graphs you might come across in your line of work.

In computer graphics, two or three-dimensional pictures can be created that are used for research. Many hardware devices algorithm has been developing for improving the speed of picture generation with the passes of time. It includes the creation storage of models and image of objects. These models for various fields like engineering, mathematical and so on.

# Applications of Computer Graphics

Some of the applications of computer graphics are:

1. **Computer Art :**Using computer graphics we can create fine and commercial art which include animation packages, paint packages. These packages provide facilities for designing object shapes and specifying object motion. Cartoon drawing, paintings, logo design can also be done.
2. **Computer Aided Drawing:** Designing of buildings, automobile, aircraft is done with the help of computer aided drawing, this helps in providing minute details to the drawing and producing more accurate and sharp drawings with better specifications.
3. **Presentation Graphics:** For the preparation of reports or summarising the financial, statistical, mathematical, scientific, economic data for research reports, managerial reports, moreover creation of bar graphs, pie charts, time chart, can be done using the tools present in computer graphics.
4. **Entertainment:** Computer graphics finds a major part of its utility in the movie industry and game industry. Used for creating motion Pictures , music video, television shows, cartoon animation films. In the game industry where focus and interactivity are the key players, computer graphics helps in providing such features in the efficient way.
5. **Education:** Computer generated models are extremely useful for teaching huge number of concepts and fundamentals in an easy to understand and learn manner. Using computer graphics many educational models can be created through which more interest can be generated among the students regarding the subject.
6. **Training:** Specialized system for training like simulators can be used for training the candidates in a way that can be grasped in a short span of time with better
7. **Visualization:** Today the need of visualize things have increased drastically, the need of visualization can be seen in many advance technologies, data visualization helps in finding insights of the data, to check and study the behavior of processes around us we need appropriate visualization which can be achieved through proper usage of computer graphics.

**INTRODUCTION OF BOAT**

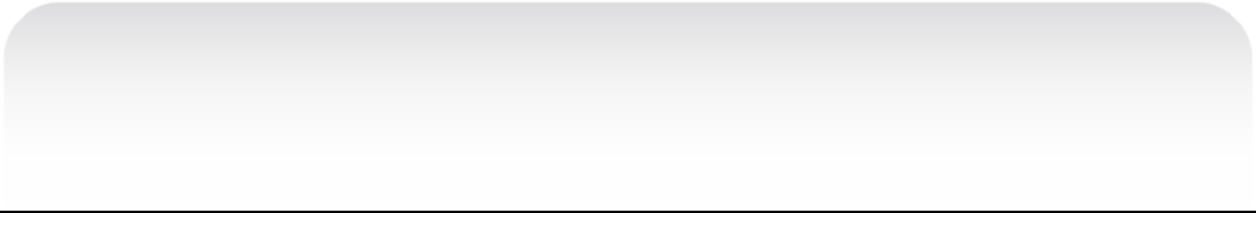
**Moving Boat in River**

**The Purpose of the project entitled as “Moving boat in River”. Computer graphics is responsible for displaying art and image data effectively and meaningfully to the consumer .it is also used for processing image data received from the physical world, Such as photo and video content**



**FUNCTIONS OF BOAT**

* [**getmaxx()**](https://www.geeksforgeeks.org/getmaxx-function-c/)**:** The graphics.h [header](https://www.geeksforgeeks.org/header-files-in-c-cpp-and-its-uses/)file includes the getmaxx() function, which returns the maximum **X** coordinate for the current graphics mode and driver.
* [**setcolor(N)**](https://www.geeksforgeeks.org/setcolor-function-c/)**:** The **setcolor() function** in the header file graphics.h is used to change the current drawing color to the new color.
* [**setlinestyle(linestyle, pattern, thickness):**](https://www.geeksforgeeks.org/setlinestyle-function-c/)The setlinestyle() function in the header file graphics.h sets the style for all lines drawn by using functions like line, lineto, rectangle, drawpoly, and so on.
* [**rectangle(X1, Y1, X2, Y2)**](https://www.geeksforgeeks.org/draw-rectangle-c-graphics/)**:** It is employed in the creation of a rectangle. The rectangle must be drawn using the coordinates of the left top and right bottom corners. The X-coordinate and Y-coordinate of the top left corner are **X1** and **Y1** and the X-coordinate and Y-coordinate of the bottom right corner are **X2** and **Y2** respectively.
* [**floodfill(pattern, color)**](https://www.geeksforgeeks.org/setfillstyle-floodfill-c/)**:** The function is used to fill a confined space. To fill the area, the current fill pattern and color are used.



**CG\_PROJEC.C**

#include<conio.h>

#include<stdio.h>

#include<graphics.h>

#include<math.h>

#include<stdlib.h>

#include<dos.h>

int gd=DETECT,gm,xmax,ymax,x,y,tx,ty;

void drawBoat()

{

static int t=0;

line(x,y,x+200,y);

line(x,y,x+20,y+60);

line(x+20,y+60,x+180,y+60);

line(x+180,y+60,x+200,y);

line(x+150,y,x+150,y-35);

setfillstyle(SOLID\_FILL,BLACK);

fillellipse(x+150,y-50,15,15);

setfillstyle(SOLID\_FILL,YELLOW);

fillellipse(x+150,y-60,35,3);

fillellipse(x+150,y-65,10,10);

setfillstyle(SOLID\_FILL,BROWN);

floodfill(x+40,y+20,WHITE);

if(t<1)

{

line(x+150,y-25,x+130,y-15);

line(x+130,y-15,x+110,y-19);

line(x+150,y-25,x+107,y-25);

line(x+107,y-25,x+110,y-10);

line(x+115,y-10,x+108,y-10);

line(x+115,y-10,x+135,y+60);

line(x+108,y-10,x+128,y+60);

line(x+135,y+60,x+128,y+60);

}

else

{

line(x+150,y-25,x+135,y-20);

line(x+140,y-20,x+120,y-10);

line(x+150,y-25,x+120,y-20);

line(x+120,y-20,x+130,y-5);

line(x+123,y-5,x+118,y-5);

line(x+118,y-5,x+150,y+60);

line(x+123,y-5,x+158,y+60);

line(x+123,y+60,x+158,y+60);

}

t=(t+1)%4;

}

void drawWave()

{

static int waveh=10,hdiff=0,phasediff=10;

tx=0;

ty=y+40;

for(;tx<xmax\*3;tx+=3)

{

putpixel(tx/3,(ty+hdiff)+waveh\*sin((tx+phasediff)\*3.14f/180),3);

}

hdiff=(hdiff+2)%4;

phasediff=(phasediff+20)%70;

setfillstyle(SOLID\_FILL,3);

floodfill(xmax-1,ymax-2,3);

}

void rain()

{

int i,rx,ry;

setcolor(WHITE);

for(i=0;i<1000;i++)

{

rx=random(xmax);

ry=random(ymax);

if(ry<y+40)

{

if((ry>y+10||ry<y-77))

line(rx,ry,rx+2,ry+2);

else if((rx<x+90||rx>x+180))

{

line(rx,ry,rx+2,ry+2);

}

}

}

}

void text()

{// FIRST PAGE

initgraph(&gd,&gm,"C:\\TURBOC3\\BGI");

settextstyle(BOLD\_FONT,HORIZ\_DIR,4);

setcolor(CYAN);

outtextxy(170,50,"WELCOME TO");

settextstyle(BOLD\_FONT,HORIZ\_DIR,4);

outtextxy(170,110,"MY PROJECT");

settextstyle(BOLD\_FONT,HORIZ\_DIR,1);

setcolor(YELLOW);

outtextxy(10,10,"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

settextstyle(BOLD\_FONT,HORIZ\_DIR,1);

setcolor(RED);

outtextxy(10,250,"SUBMITTED TO: ");

settextstyle(BOLD\_FONT,HORIZ\_DIR,1);

setcolor(YELLOW);

outtextxy(10,300,"MS.PRIYA SHARMA");

settextstyle(BOLD\_FONT,HORIZ\_DIR,1);

setcolor(RED);

outtextxy(370,250,"SUBMITTED BY: ");

settextstyle(BOLD\_FONT,HORIZ\_DIR,1);

setcolor(YELLOW);

outtextxy(380,300,"Manpreet (6405)");

getch();

}

void main()

{

initgraph(&gd,&gm,"C:\\TURBOC3\\BGI");

text();

cleardevice();

xmax=getmaxx();

ymax=getmaxy();

x=250;

y=ymax-150;

while(!kbhit())

{

x-=8;

drawBoat();

drawWave();

rain();

delay(300);

cleardevice();

}

getch();

setcolor(WHITE);

settextstyle(BOLD\_FONT,HORIZ\_DIR,4);

outtextxy(110,80,"Thank You");

getch();

}

**SCREENSHORTS**



