

REPORT
ON
OBJECT ORIENTED
PROGRAMMING
(C++)
MINI PROJECT
on



GAME

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INTRODUCTION

THIS REPORT IS ON “QUIZ GAME” PROJECT DEVELOP ON C++ PLATFORM FOR FRONT END MECHANISM OF THE SOFTWARE AND FOR DATABASE DATA FILE HANDLING MECHANISM OF C++ USING fstream HEADER FILE IS USED .

MAIN OBJECTIVE OF THIS PROJECT IS TO DESIGNED A GAME, WHICH PROVIDES A FUN WAY TO STUDY AND IN THE PROCESS HELP TO IMPROVE ONE’S GENERAL KNOWLEDGE (GK) , INTELLIGENCE QUOTIENT (IQ) AND MATHEMATICAL SKILLS WHICH IS VERY IMPORTANT FOR TODAY'S COMPETITIVE WORLD .

SO KEEPING THIS THOUGHTS IN MIND I INDERDEEP SINGH CREATED THIS SOFTWARE ON “QUIZ GAME ” IN WHICH USERS CAN PLAY , EDIT AND CREATE THEIR OWN CUSTOM QUIZ ON TOPICS MATHS, GK AND IQ . SO THAT USERS CAN ENJOY WHILE PLAYING AND BY CHALLENGING OTHERS .

THIS PROJECT IS MADE ON TurboC++

HARDWARE REQUIRED

- Processor (CPU) with 2 gigahertz (GHz) frequency or above
- A minimum of 2 GB of RAM
- Monitor Resolution 1024 X 768 or higher
- A minimum of 2GB of available space on the hard disk
- Keyboard and a Microsoft Mouse

SOFTWARE REQUIRED

1) Operating System :

- Windows 7, Windows 8 or Windows 10
- Mac OSX 10.8, 10.9, 10.10 or 10.11
- Ubuntu and above

2) COMPILER :

- Turbo C/C++ for windows
- gcc for Mac and Linux

SOURCE CODE

```
//    CLASS QUIZ

class QUIZ
{

private:

    int marks,q_num;
    char ques[500],correct,answer;
    char op1[100],op2[100],op3[100],op4[100];

public:
    void getdata();
    float putdata();

    void write_quiz(char *);
    void display_quiz(char *ch);
    void modify_quiz(char *);
    void create_quiz();
};


void QUIZ::getdata()
{
    static i=0,j=1;
    clrscr();
    if(i==0){
        cout<<"ENTER THE MARKS OF EACH QUESTION
:.";

        cin>>marks; i=marks;
        }else{marks=i;}

    cout<<"\n_____ \n\n
";
};
```

```

        cout<<"Enter The Question :";
        gets(ques);

        cout<<"\nEnter The Option 1 : ";
        gets(op1);

        cout<<"\nEnter The Option 2 : ";
        gets(op2);

        cout<<"\nEnter The Option 3 : ";
        gets(op3);

        cout<<"\nEnter The Option 4 : ";
        gets(op4);

        cout<<"\n_____
        _____\n\n";

        cout<<"ENTER THE CORRECT ANSWER
OPTION :";
        cin>>correct;

        q_num=j;
        ++j;
    }

```

```

float QUIZ::putdata()
{
    clrscr();

    cout<<setw(60)<<setfill(95)<<
endl;
    cout<<"\n\nQuestion
"<<q_num<<":";
    puts(ques);
    cout<<setw(60)<<setfill(95)<<
"\n";
    cout<<"\n\tOption 1 : ";
    puts(op1);

```

```

        cout<<"\n\tOption 2 : ";
        puts(op2);

        cout<<"\n\tOption 3 : ";
        puts(op3);

        cout<<"\n\tOption 4 : ";
        puts(op4);

        cout<<"\nENTER THE
CORRECT OPTION :";
        cin>>answer;
        if(answer==correct)
            {clrscr();cout<<"\n\t\t!!
CORRECT !!";return(marks);}
        else
            {clrscr();cout<<"\n\t\t\t#
WRONG #";return(-marks);}

        return(0);
    }

void QUIZ::write_quiz(char *name)
{
    clrscr();
    QUIZ qt;
    int num,i;
    ofstream outFile;
    outFile.open(name,ios::app|io
s::binary);

    cout<<"Enter the number of
questions\n";
    cin>>num;

    for(i=0;i<num;i++)
    {
        qt.getdata();
        outFile.write((char *) &qt,
sizeof(QUIZ));
        getch();
    }
    outFile.close();
}

```



```

clrscr();
    cout<<"\n\n\n\n\t\tQuiz Has
Been Created ";
    getch();
    return;
}

```

```

void QUIZ::display_quiz(char *file)
{
    clrscr();
    int student;
    QUIZ qt;
    int i=0,score,k=0,j=0;

    ifstream inFile;
    inFile.open(file,ios::binary);

    if(!inFile)
    {
        cout<<"File could not be
open !! Press any Key...";
        getch();
        return;
    }

    cout<<"\n\n\n\t\tDISPLAY ALL
QUIZ !!!\n\n";

    while(inFile.read((char *) &qt,
sizeof(QUIZ)))
    {

        i=qt.putdata();
        cout<<"\n\n=====
=====
===== "<<endl;
        if(i>0)

{score+=i;if(k==0){k=i;}}
        else if(i<0)
            {if(k==0){k=(-1)*i;}}
    }
}

```

```

        ++j;

        getch();
    }

    clrscr();

    cout<<"\n\n\t\t!! YOUR
SCORE
!!\n\n\n\t\t\t"<<score<<"/"<<k*j;
    cout<<"\n\n\n\t\t!! THANKS
FOR PLAYING !!";

    inFile.close();

    getch();
}

void QUIZ::modify_quiz(char *file)
{
    clrscr();
    int found=0,n;
    QUIZ q;
    fstream File;
    File.open(file,ios::in|ios::out);

    cout<<"\n\n !! Enter the
question number to edit\n";
    cin>>n;

    if(!File)
    {
        cout<<"File could not be
open !! Press any Key...";
        getch();
        return;
    }

    while(File.read((char *) &q,
sizeof(QUIZ)) && found==0)
    {
        if(q.q_num==n)
        {

```

```

cout<<"\n\nPlease Enter The New
Details of Quiz"<<endl;
    getch();
    q.getdata();
    int
pos=(-1)*sizeof(q);
    File.seekp(pos,ios
::cur);
    File.write((char *)
&q, sizeof(QUIZ));
    cout<<"\n\n\t
Record Updated";
    found=1;
    }
}
File.close();
if(found==0)
    cout<<"\n\n Record Not
Found ";
    getch();
}

```

```

//          CLASS QUIZ
RECORD

class QUIZ_RECORD:public QUIZ
{

    char
    quiz_name[50],name[30],pass[30];
    int num_quiz;

    public:

        int num;
        int ch;
        void get_record();
        void put_record();

        char
        *write_record(QUIZ_RECORD
        *ptr);
        void
        read_record(QUIZ_RECORD *ptr);
        void
        delete_record(QUIZ_RECORD
        *ptr);
        char *get_quiz_name();

        virtual char *getfile()
        {
            clrscr();
            return("NULL");
        }

};

```

```

//          CLASS QUIZ_RECORD
FUNCTION DEFINATIONS

```

```

char*
QUIZ_RECORD::get_quiz_name()
{

```

```

cout<<"\n _____
_____ "<<endl;
cout<<"\n\nENTER THE QUIZ
NUMBER TO PLAY : ";
cin>>ch;

QUIZ_RECORD qr;

ifstream inFile;
inFile.open(getfile(),ios::binary);

while(inFile.read((char *)
&qr,sizeof(QUIZ_RECORD)))
{
    if(ch==qr.num)
    {
        getch();

return(strcat(qr.quiz_name,".txt"));
    }
}
}

```

```

void QUIZ_RECORD::get_record()
{
    clrscr();
    char confirm;
    cout<<"\n\n\nENTER THE
NUMBER : "<<endl;
    cin>>num;
    cout<<"\n\nENTER YOUR
NAME"<<endl;
    gets(name);
    cout<<"\n\nGIVE YOUR QUIZ A
NAME"<<endl;
    gets(quiz_name);
    cout<<"\n\nSET PASSWORD
:"<<endl;
    gets(pass);
    getch();
}

```



```

void
QUIZ_RECORD::read_record(QUI
Z_RECORD *ptr)
{
    QUIZ_RECORD qr;
    ifstream inFile;
    char *name=ptr->getfile();

    inFile.open(name,ios::binary);

    if(!inFile)
    {
        cerr<<"FILE NOT EXIST"<<endl;
        getch();
        return;
    }

    clrscr();
    cout<<"\t\n - - QUIZ NAME - -
"<<endl;
    while(inFile.read((char *)
&qr,sizeof(QUIZ_RECORD)))
    {
        qr.put_record();
        cout<<"\n_____
_____
"__<<endl;
    }

    inFile.close();
    getch();
}

void QUIZ_RECORD::delete_record(QUIZ_RECORD *ptr)
{
    clrscr();
    char confirm[30];
    QUIZ_RECORD rt;
    int n,flag=0;
    ifstream inFile;
    char *ch=ptr->getfile(),*del;
    inFile.open(ch,ios::binary);

    if(!inFile)
    {
        cout<<"File could not be open !! Press any Key...":
    }
}

```

```

    getch();
    return;
}

cout<<setw(40)<<setfill(95)<<endl;
rt.read_record(ptr);
cout<<"\n\nEnter the Quiz Number to DELETE"<<endl;
cin>>n;
cout<<"\n\nEnter the password :"<<endl;
gets(confirm);
getch();
ofstream outFile;
outFile.open("Temp.txt",ios::out|ios::out);

```

```

inFile.seekg(0,ios::beg);

```

```

while(inFile.read((char *) &rt, sizeof(QUIZ_RECORD)))
{
    if(rt.num==n)
    {
        if(strcmp(rt.pass,confirm)==0)
        {
            flag=1;
            del=strcat(rt.quiz_name, ".txt");
            cout<<" MATCH "<<del;
            getch();
            break;
        }
    }
}

```

```

    inFile.seekg(0,ios::beg);
    if(flag==1)
    {
        while(inFile.read((char *) &rt, sizeof(QUIZ_RECORD)))
        {
            if(rt.num!=n)
            {
                getch();
                outFile.write((char *) &rt, sizeof(QUIZ_RECORD));
            }
        }
    }
}

```



```

outFile.close();
inFile.close();

if(flag==1)
{
    remove(ch);
    remove(strcat(del,".txt"));
    cout<<ch<<endl<<del;
    rename("Temp.txt",ch);
    getch();
    clrscr();
    cout<<"\n\n\t!! Record Deleted !!";
}
else if (flag==0)
{
    remove("Temp.txt");
    clrscr();
    cout<<"\n\n\t!! WORNG PASSWORD !!";
}

else
{
    remove("Temp.txt");
    clrscr();
    cout<<"\n\n\t!! NOT FOUND !!";

}

getch();
}

```

```

//      CLASS MATHS

class QUIZ_MATHS:public
QUIZ_RECORD
{
public :
    void play();
    void create();
    void del();
    void modify_q();
    char *getfile();
};

char * QUIZ_MATHS::getfile()
{
    return("record1.txt");
}

void QUIZ_MATHS::play()
{
    QUIZ_MATHS m;
    read_record(&m);
    display_quiz(get_quiz_name());
    getch();
}

void QUIZ_MATHS::create()
{
    QUIZ_MATHS m;
    write_quiz(write_record(&m));
}

void QUIZ_MATHS::del()
{
    QUIZ_MATHS m;
    delete_record(&m);
}

void QUIZ_MATHS::modify_q()
{
    QUIZ_MATHS m;
    modify_quiz(get_quiz_name());
}

```

```

//          CLASS IQ

class QUIZ_IQ:public
QUIZ_RECORD
{
public :
    void play();
    void create();
    void del();
    void modify_q();
    char *getfile();
};

char * QUIZ_IQ::getfile()
{
    return("record2.txt");
}

void QUIZ_IQ::play()
{
    QUIZ_IQ m;
    read_record(&m);
    display_quiz(get_quiz_name());
    getch();
}

void QUIZ_IQ::create()
{
    QUIZ_IQ m;
    write_quiz(write_record(&m));
}

void QUIZ_IQ::del()
{
    QUIZ_IQ m;
    delete_record(&m);
}

void QUIZ_IQ::modify_q()
{
    QUIZ_IQ m;
    modify_quiz(get_quiz_name());
}

```

```
//          CLASS QUIZ GK
```

```
class QUIZ_GK:public  
QUIZ_RECORD
```

```
{  
    public :  
        void play();  
        void create();  
        void del();  
        void modify_q();  
        char *getfile();  
};
```

```
char * QUIZ_GK::getfile()  
{  
    return("record3.txt");  
}
```

```
void QUIZ_GK::play()  
{  
    QUIZ_GK m;  
    read_record(&m);  
    display_quiz(get_quiz_name());  
    getch();  
}
```

```
void QUIZ_GK::create()  
{  
    QUIZ_GK m;  
    write_quiz(write_record(&m));  
}
```

```
void QUIZ_GK::del()  
{  
    QUIZ_GK m;  
    delete_record(&m);  
}
```

```
void QUIZ_GK::modify_q()  
{  
    QUIZ_GK m;  
    modify_quiz(get_quiz_name());  
}
```

CLASSES/HEADER FILES

HEADER FILES

```
#include <iostream.h>
#include <fstream.h>
#include <iomanip.h>
#include <string.h>
#include <stdio.h>
#include <conio.h>
#include <stdlib.h>
#include "quiz.h"
#include "quiz_rec.h"
#include "quiz_sub.h"
```

QUIZ.h

CLASS QUIZ

DATA MEMBERS

```
private:

int marks,q_num;
char ques[100],correct,answer;
char
op1[10],op2[10],op3[10],op4[10];
```

MEMBER FUNCTIONS

```
public:
void getdata();
float putdata();

void write_quiz(char *);
void display_quiz(char *ch);
void modify_quiz(char *);
void create_quiz();
```

QUIZ_REC.h

CLASS QUIZ RECORD

DATA MEMBERS

```
public:
char quiz_name[50],name[30],pass[30];
int num_quiz ;
```

MEMBER FUNCTIONS

```
public:
char *write_record(QUIZ_RECORD *ptr);
void read_record(QUIZ_RECORD *ptr);
void delete_record(QUIZ_RECORD *ptr);
char *get_quiz_name();

virtual char *getfile()
{
clrscr();
return("NULL");
}
```

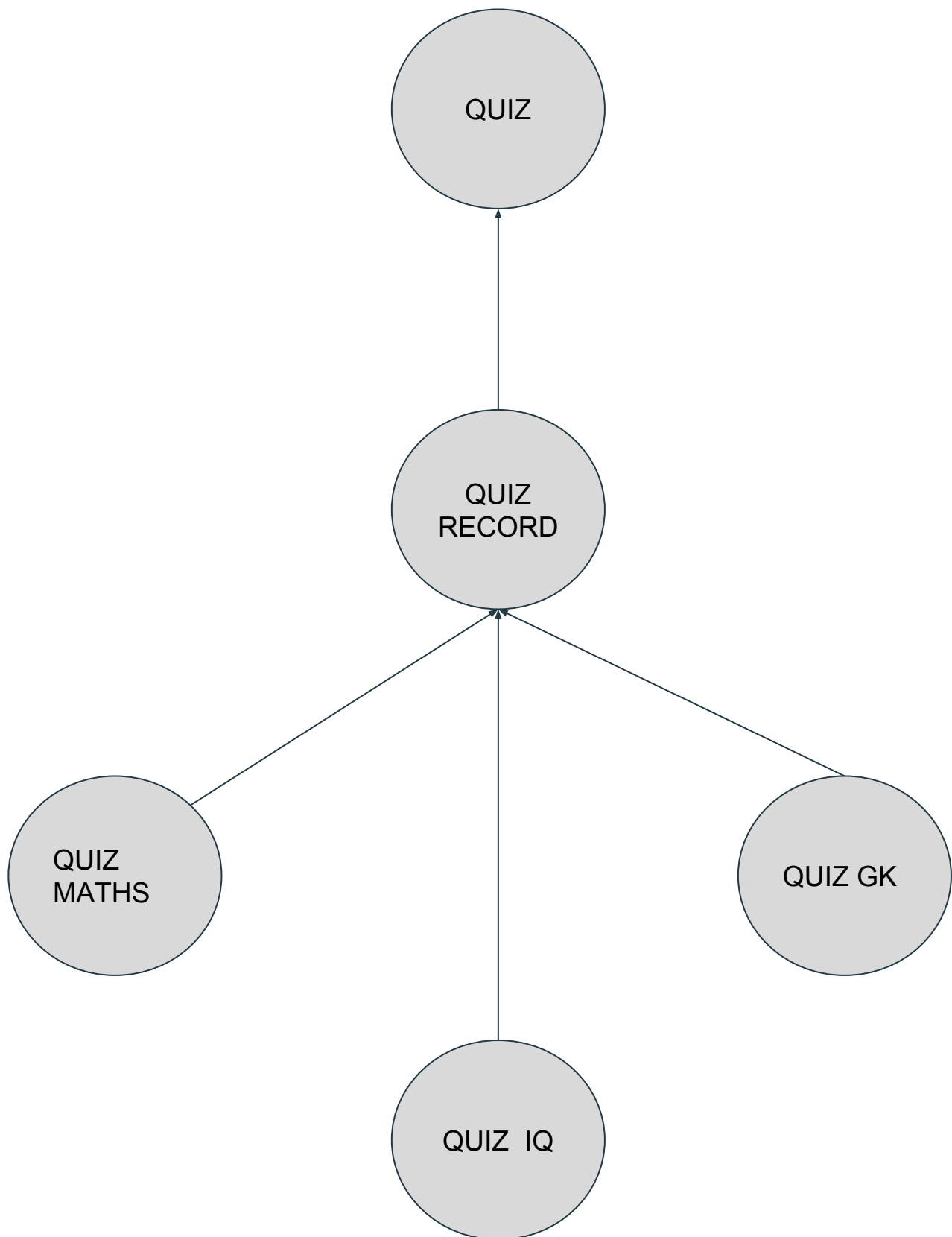
QUIZ_SUB.h
CLASS QUIZ_MATHS
DATA MEMBERS
–
MEMBER FUNCTIONS
public : void play(); void create(); void del(); void modify_q(); char *getfile();

QUIZ_SUB.h
CLASS QUIZ_IQ
DATA MEMBERS
–
MEMBER FUNCTIONS
public : void play(); void create(); void del(); void modify_q(); char *getfile();

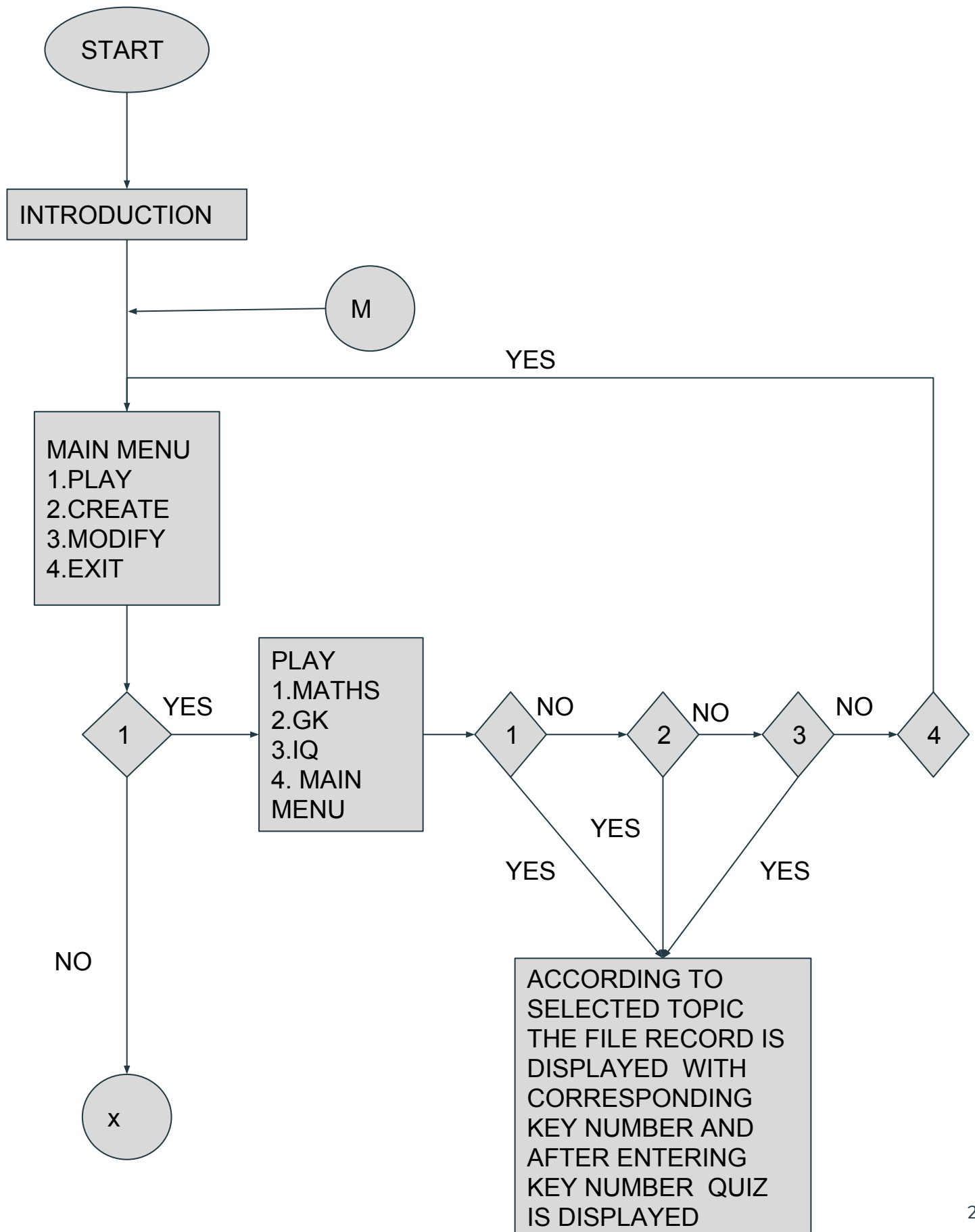
QUIZ_SUB.h
CLASS QUIZ_GK
DATA MEMBERS
–
MEMBER FUNCTIONS
public : void play(); void create(); void del(); void modify_q(); char *getfile();

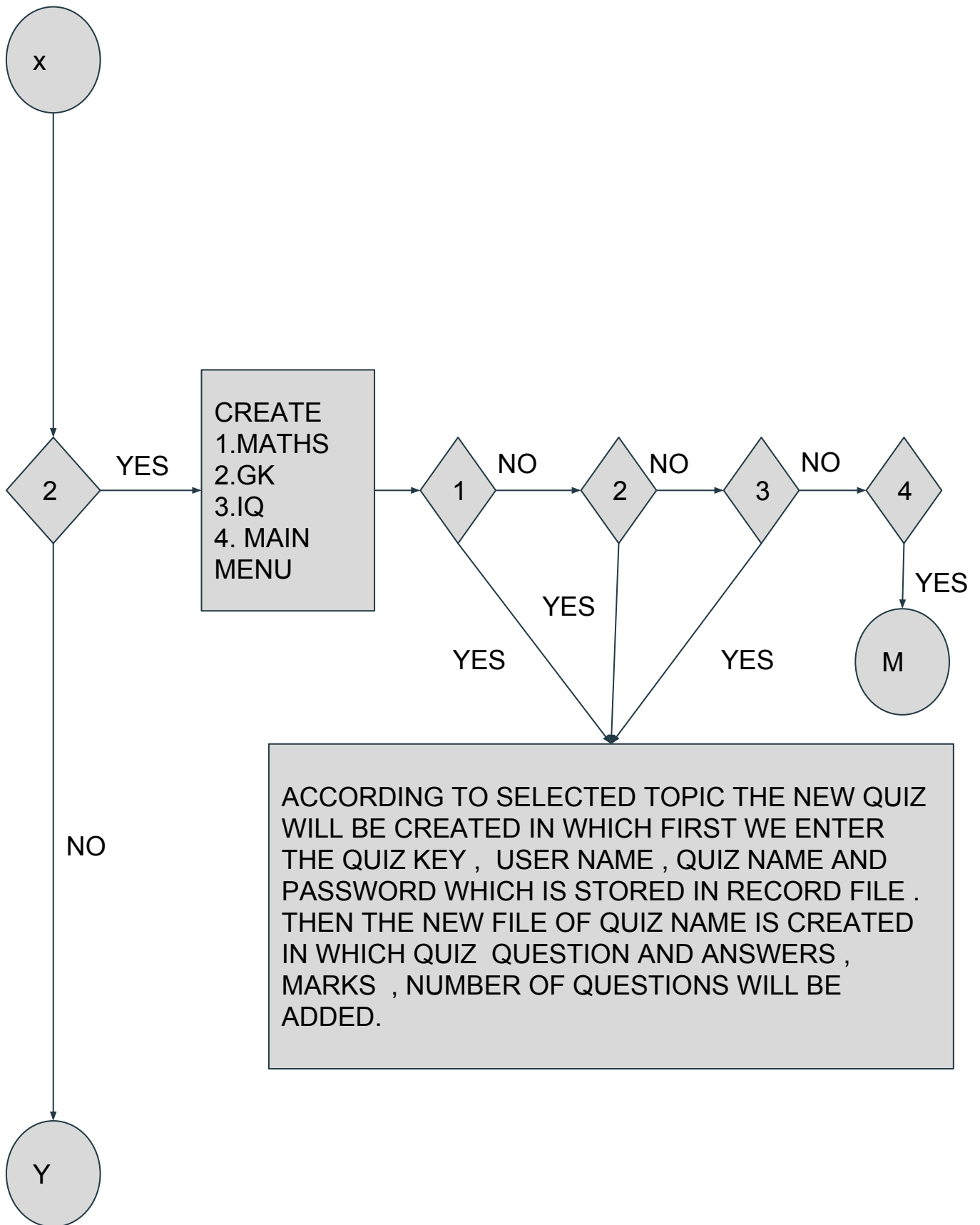
QUIZGAME.cpp
DATA MEMBERS
–
MEMBER FUNCTIONS
void intro(); void main_menu(); void play_quiz(); void modify(); void make(); void m_mod(); void m_del();

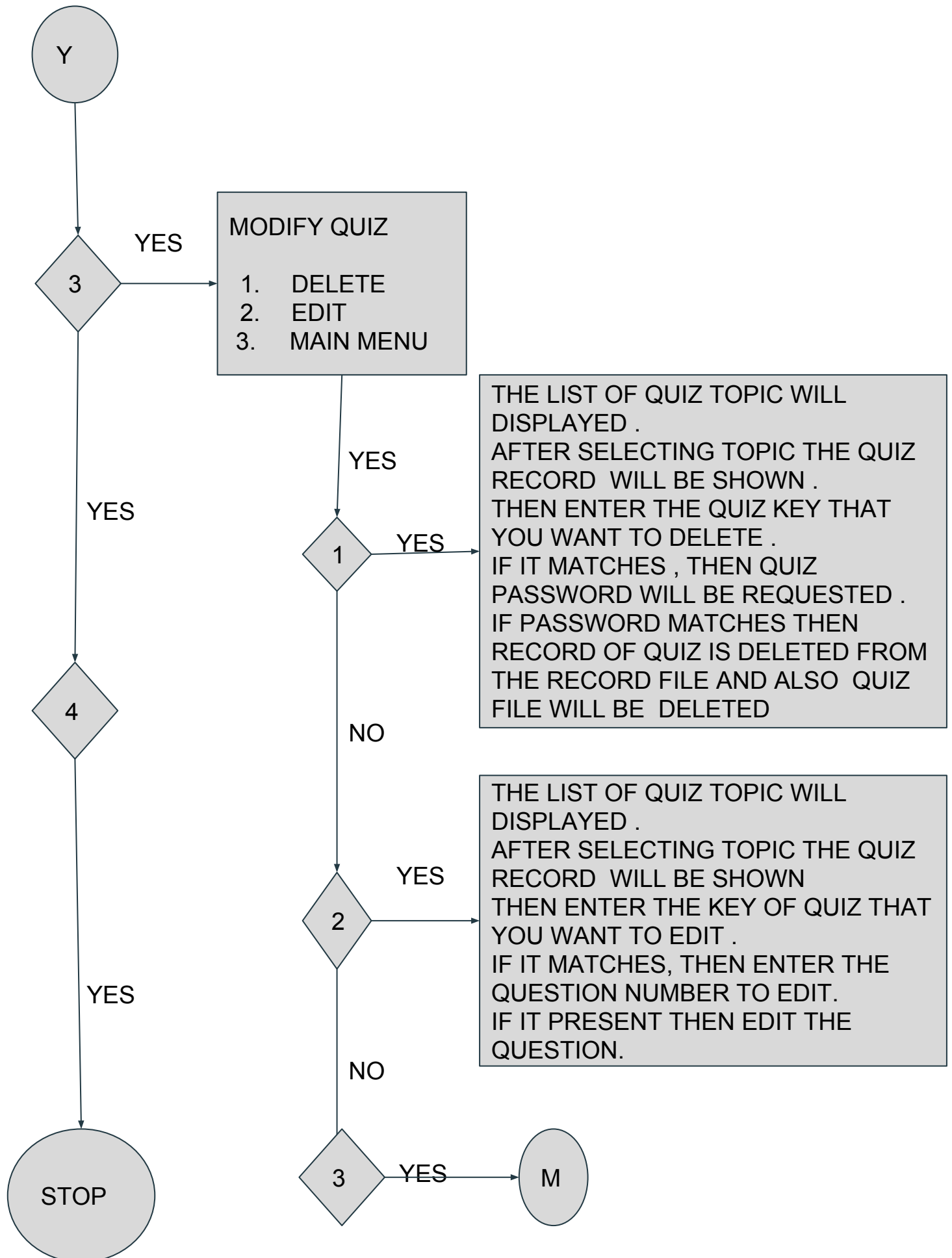
INHERITANCE CHART



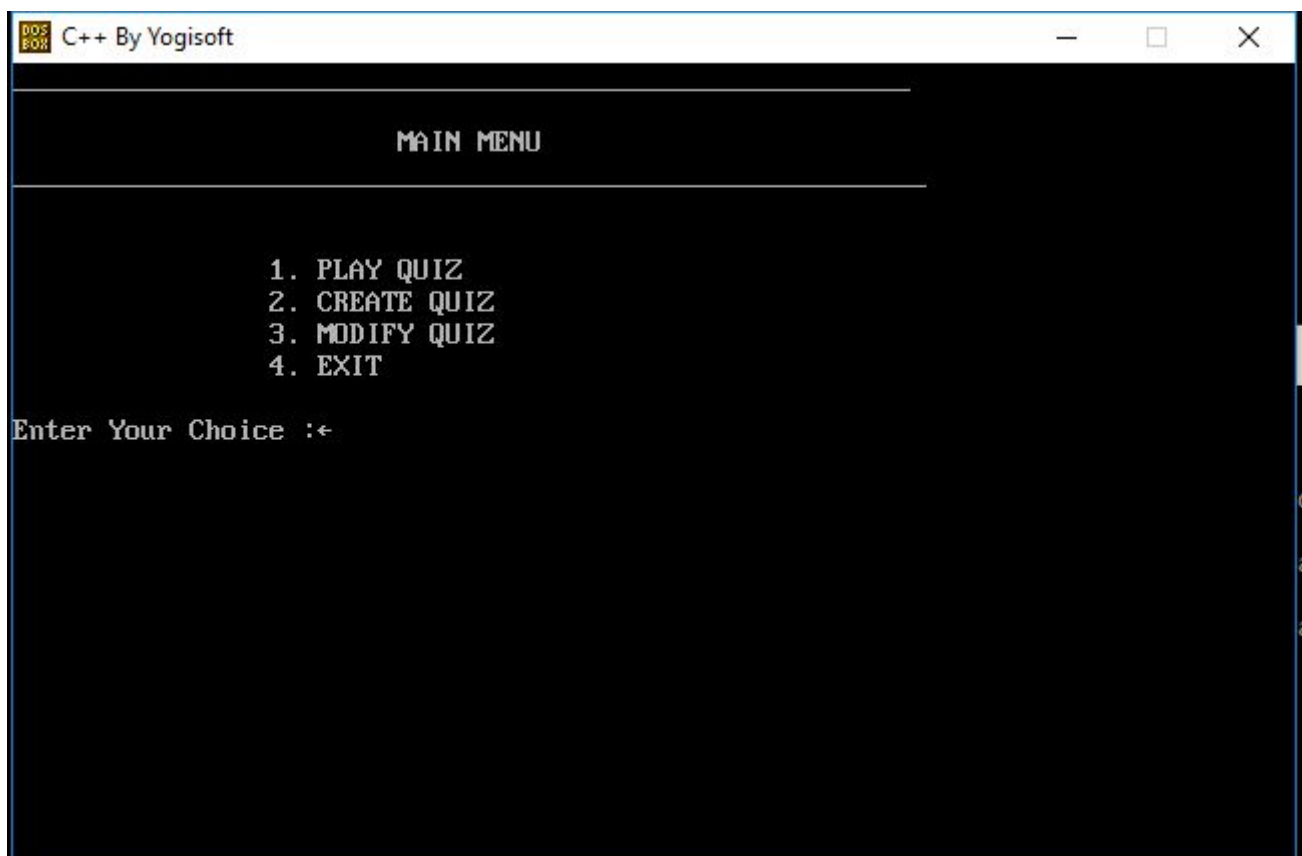
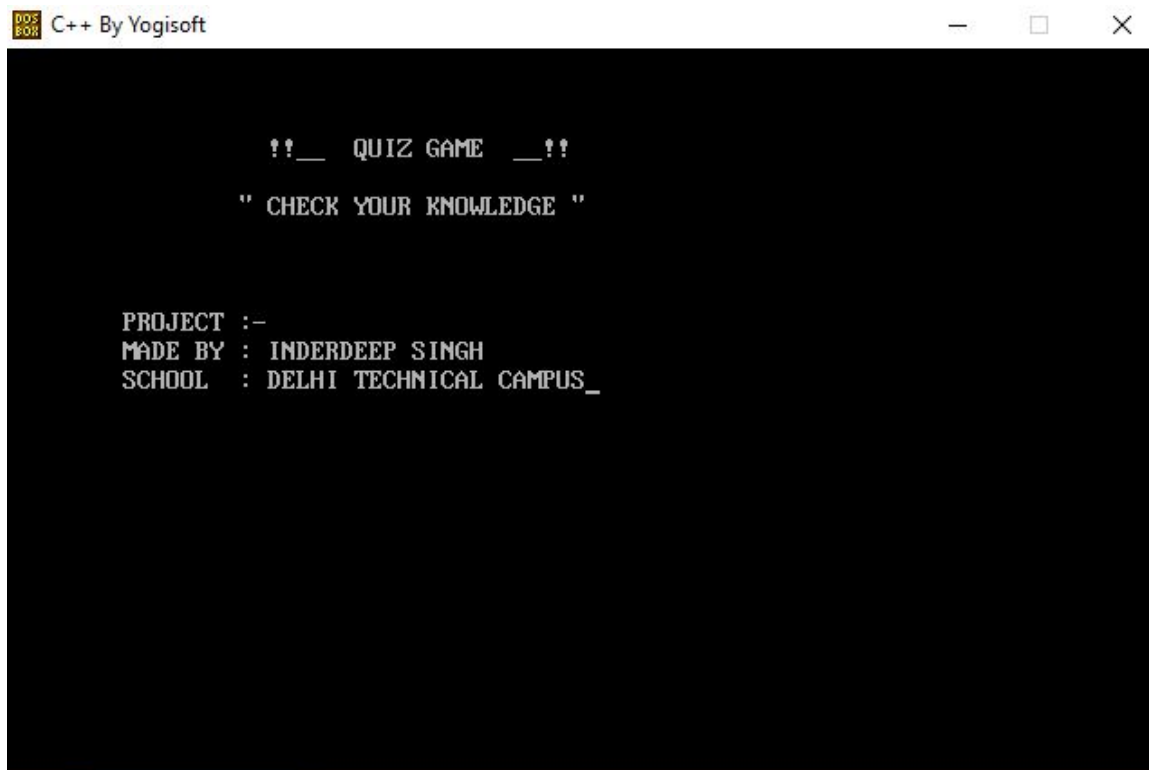
WORKFLOW







WORKING OF SOFTWARE



```

DOS
BOX
C++ By Yogisoft
!      SELECT QUIZ TOPIC TO PLAY      !
-----
1. MATHS
Check your claculations

2. IQ
I know you are smart

3. GK
Check Knowledge

4. MAIN MENU

Enter Your Choice :<

```

```

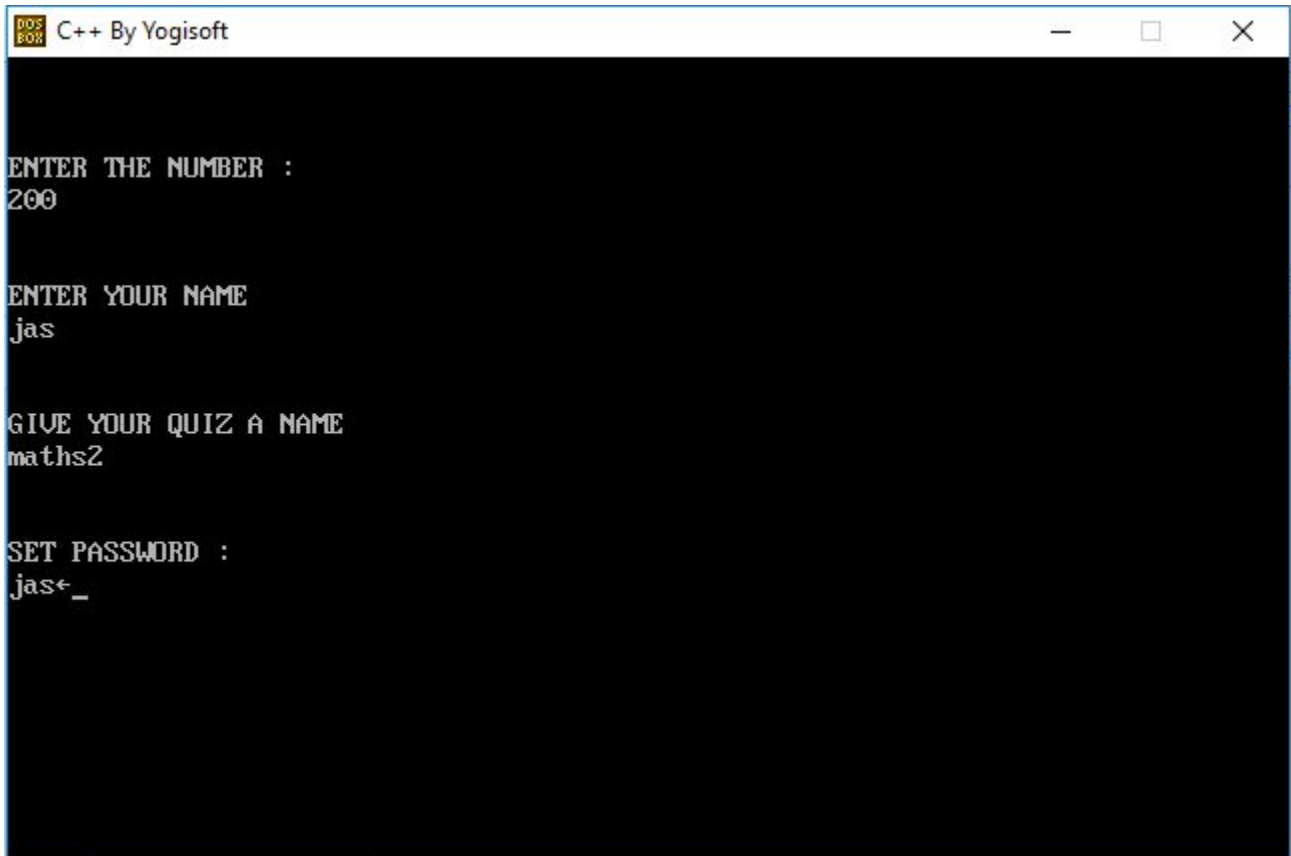
DOS
BOX
C++ By Yogisoft
-- QUIZ NAME --
100    math1    BY - nderdeep
-----
ENTER THE QUIZ NUMBER TO PLAY : 100<

```

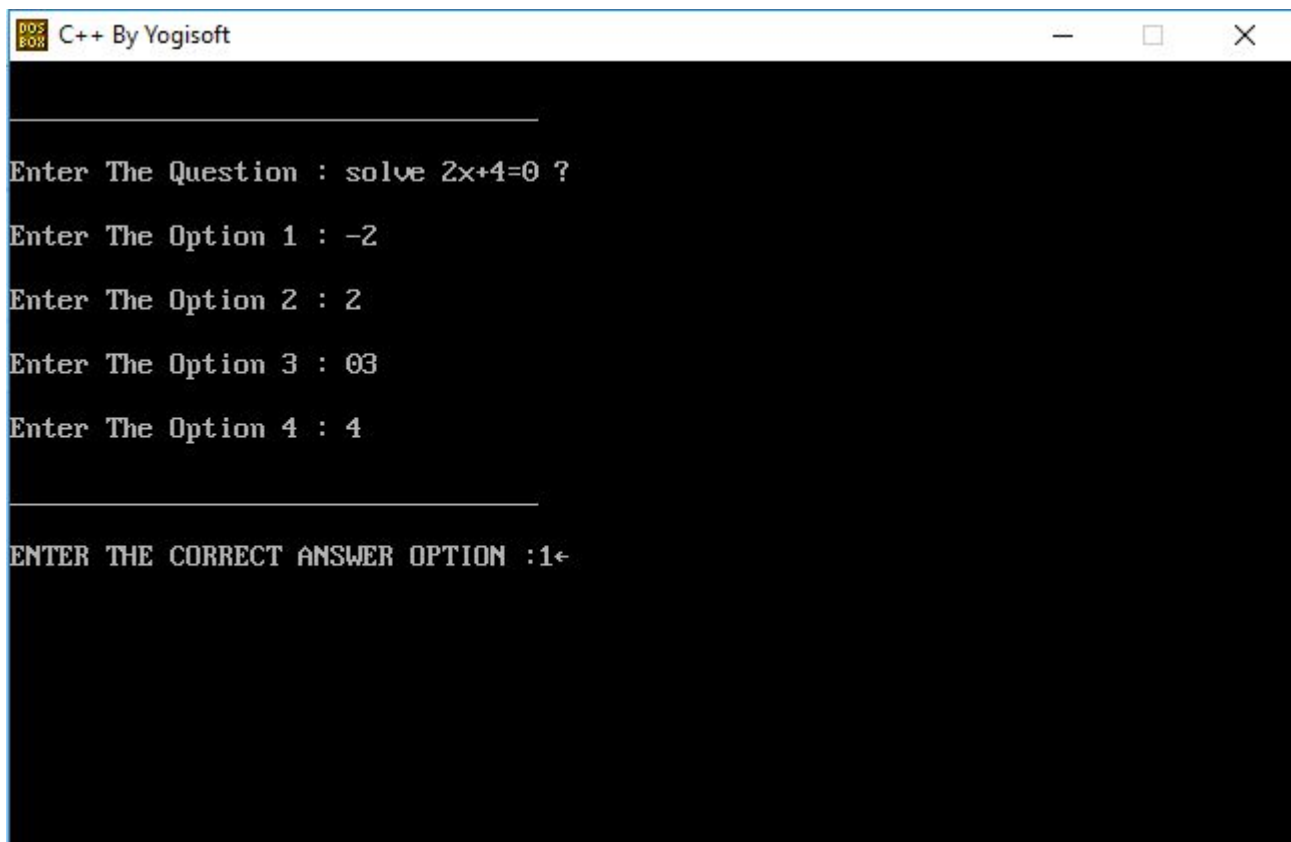
```
dos box C++ By Yogisoft
Question 1: solve 2x-1=0 ?
Option 1 : x=0
Option 2 : x=0.5
Option 3 : x=-.2
Option 4 : x=1
ENTER THE CORRECT OPTION :2←_
```

```
dos box C++ By Yogisoft
# WRONG #
=====
```





```
ENTER THE NUMBER :  
200  
  
ENTER YOUR NAME  
jas  
  
GIVE YOUR QUIZ A NAME  
maths2  
  
SET PASSWORD :  
jas+_
```



```
Enter The Question : solve  $2x+4=0$  ?  
Enter The Option 1 : -2  
Enter The Option 2 : 2  
Enter The Option 3 : 03  
Enter The Option 4 : 4  
  
ENTER THE CORRECT ANSWER OPTION :1←
```

