COMPUTER SCIENCE PROJECT (C++) 2018-19

TOPIC: TIMETABLE GENERATOR





Submitted to:

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CERTIFICATE

This is to certify that Sahil Yadav of Class XII has prepared the report on the project entitled "Timetable Generator" under the guidance of his computer science teacher Ms. Neha Adlakha.

Original and genuine investigation work has been carried out to investigate about the subject matter and the related data collection.

(Ms. Neha Adlakha) Bhatnagar International School, Vasant Kunj

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude to my teacher Ms. Neha Adlakha who gave me the golden opportunity to do this wonderful project on the topic "Timetable Generator", which also helped me in doing a lot of research and I came to know about so many new things. I am really thankful to her.

Secondly, I would also like to thank my parents and friends who helped me a lot in finalizing this project within the limited time frame.

HEADER FILES USED

1) fstream.h

- i) ifstream and ofstream
- ii) open() and close()
- iii) read() and write()
- iv)seekg()
- v) cin and cout

2) conio.h

- i) clrscr()
- ii) getch()

3) stdlib.h

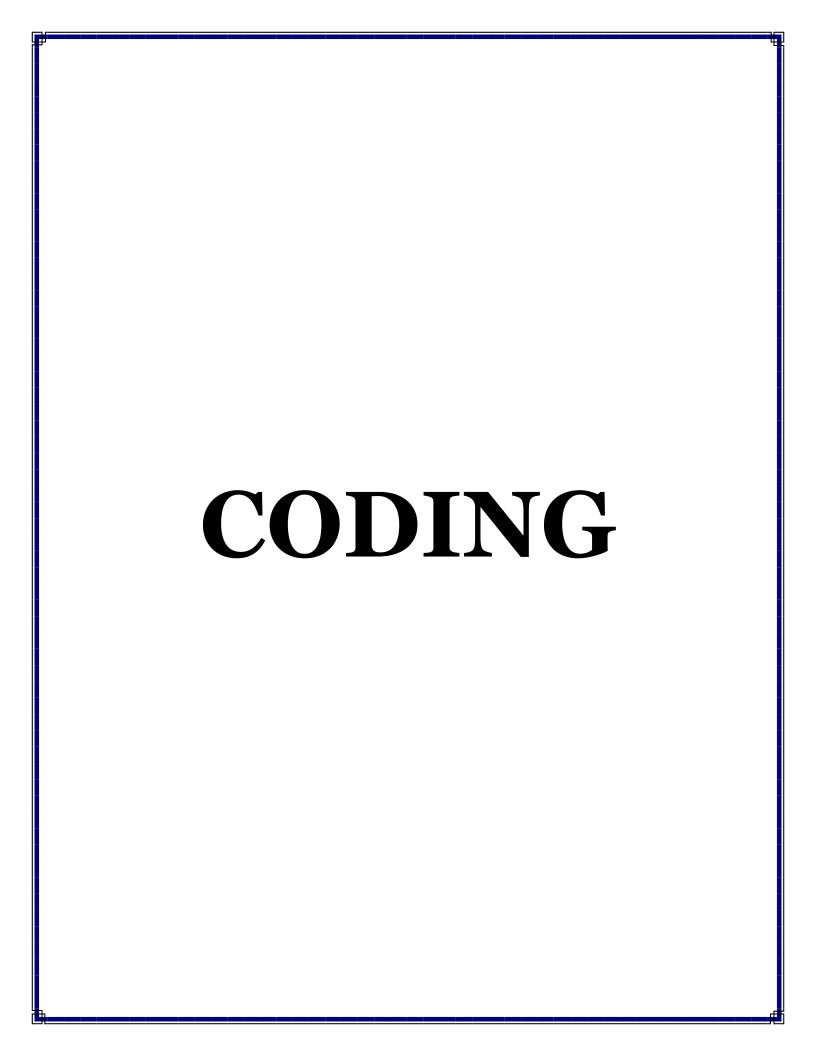
- i) randomize()
- ii) random()

4) stdio.h

- i) remove()
- ii) rename()

5) ctype.h

- i) tolower()
- ii) toupper()



```
#include<fstream.h>
#include<conio.h>
#include<stdlib.h>
#include<stdio.h>
#include<ctype.h>
int p=o,c=o,m=o,b=o,e=o,g=o,y=o,z=o,w=o,o=o;
//Subject count for input table
int rp=o,rc=o,rm=o,rb=o,re=o,rg=o,ry=o,rz=o,rw=o,ro=o;
//Subject count for random generator
int dayno, periodno;
//Global variables for editperiod() function
class timetable
{
     private:
          char period[8];
     public:
          void input();
          void randomgen();
          void display();
          void dperiod(int dy,int pno);
          void edit();
}day[6];
void timetable::input()
{
     cout<<"Enter the subject codes for:\n";</pre>
```

```
for(int i=0;i<8;i++)
{
     reenter:
     cout<<"Period "<<i+1<<": ";
     cin>>period[i];
     period[i]=tolower(period[i]); //Storing periods in lowercase
     if(period[i]=='p')
                              //Subject code counters
     p++;
     else if(period[i]=='c')
     c++;
     else if(period[i]=='m')
     m++;
     else if(period[i]=='b')
     b++;
     else if(period[i]=='e')
     e++;
     else if(period[i]=='g')
     g++;
     else if(period[i]=='y')
     y++;
     else if(period[i]=='z')
     Z++;
     else if(period[i]=='w')
     w++;
     else if(period[i]=='o')
```

```
0++;
//Max. 2 same subjects per day constraint
if(p>2)
{
     cout<<"Error!\n";</pre>
      cout<<"You entered a subject more than 2 times a day!\n";</pre>
      cout<<"Re-enter the subject code for:-\n";</pre>
      --p;
     goto reenter;
if(c>2)
     cout<<"Error!\n";</pre>
      cout<<"You entered a subject more than 2 times a day!\n";
      cout<<"Re-enter the subject code for:-\n";</pre>
      --c;
     goto reenter;
}
if(m>2)
     cout<<"Error!\n";</pre>
      cout<<"You entered a subject more than 2 times a day!\n";
      cout<<"Re-enter the subject code for:-\n";</pre>
      --m;
      goto reenter;
```

```
}
if(b>2)
      cout<<"Error!\n";</pre>
      cout << "You entered a subject more than 2 times a day!\n";
      cout<<"Re-enter the subject code for:-\n";</pre>
      --b;
     goto reenter;
if(e>2)
      cout<<"Error!\n";</pre>
      cout<<"You entered a subject more than 2 times a day!\n";
      cout<<"Re-enter the subject code for:-\n";</pre>
      --e;
      goto reenter;
if(g>2)
{
      cout<<"Error!\n";</pre>
      cout<<"You entered a subject more than 2 times a day!\n";</pre>
      cout<<"Re-enter the subject code for:-\n";</pre>
      --g;
      goto reenter;
```

```
if(y>2)
      cout<<"Error!\n";</pre>
      cout<<"You entered a subject more than 2 times a day!\n";</pre>
      cout<<"Re-enter the subject code for:-\n";</pre>
      --y;
      goto reenter;
}
if(z>2)
      cout<<"Error!\n";</pre>
      cout<<"You entered a subject more than 2 times a day!\n";</pre>
      cout<<"Re-enter the subject code for:-\n";</pre>
      --Z;
      goto reenter;
}
if(w>2)
      cout<<"Error!\n";</pre>
      cout<<"You entered a subject more than 2 times a day!\n";
      cout<<"Re-enter the subject code for:-\n";</pre>
      --W;
      goto reenter;
if(o>2)
```

```
{
     cout<<"Error!\n";</pre>
     cout<<"You entered a subject more than 2 times a day!\n";
     cout<<"Re-enter the subject code for:-\n";</pre>
     --o;
     goto reenter;
}
//Wrong input checker
switch(period[i])
{
     case 'p':
                 break;
                 break;
     case 'c':
     case 'm':
                 break;
     case 'b':
                 break;
                 break;
     case 'e':
     case 'g':
                 break;
     case 'y':
                 break;
     case 'z':
                 break;
```

```
break;
                case 'w':
                case 'o':
                           break;
                default:
                           cout << "Wrong subject code! \n";
                           cout << "Re-enter the subject code for:-\n";
                           goto reenter;
     }
     p=o;
     c=o;
     m=0;
     b=o;
     e=o;
     g=0;
     y=0;
     z=0;
     w=o;
     0=0;
}
void timetable::randomgen()
{
     int r;
     for(int i=0;i<8;i++)
```

```
{
     regenerate:
     r=random(10);
     if(r==0)
     {
          period[i]='p';
          rp++;
     }
     else if(r==1)
          period[i]='c';
          rc++;
     else if(r==2)
          period[i]='m';
           rm++;
     }
     else if(r==3)
          period[i]='b';
          rb++;
     else if(r==4)
```

```
period[i]='e';
     re++;
else if(r==5)
{
     period[i]='g';
     rg++;
}
else if(r==6)
     period[i]='y';
     ry++;
}
else if(r==7)
     period[i]='z';
     rz++;
}
else if(r==8)
{
     period[i]='w';
     rw++;
else if(r==9)
```

```
period[i]='o';
     ro++;
//Max. 2 same subjects per day constraint
if(rp>2)
     --rp;
     goto regenerate;
if(rc>2)
     --rc;
     goto regenerate;
if(rm>2)
     --rm;
     goto regenerate;
if(rb>2)
     --rb;
     goto regenerate;
if(re>2)
```

```
{
     --re;
     goto regenerate;
if(rg>2)
     --rg;
     goto regenerate;
if(ry>2)
     --ry;
     goto regenerate;
if(rz>2)
     --rz;
     goto regenerate;
if(rw>2)
     --rw;
     goto regenerate;
if(ro>2)
```

```
{
                --ro;
                goto regenerate;
          }
     }
     rp=o;
     rc=o;
     rm=o;
     rb=o;
     re=o;
     rg=o;
     ry=o;
     rz=o;
     rw=o;
     ro=o;
void timetable::display()
{
     for(int i=0;i<8;i++)
     {
           cout<<"\nPeriod "<<i+1<<": "<<(char)(toupper(period[i]));</pre>
           //For displaying subjects
           switch(period[i])
                case 'p': cout<<" (Physics)";
```

```
break;
case 'c':
            cout<<" (Chemistry)";</pre>
            break;
case 'm':
            cout<<" (Maths/Library)";</pre>
            break;
            cout<<" (Biology/Library)";</pre>
case 'b':
            break;
case 'e':
            cout<<" (English)";</pre>
            break;
            cout<<" (Games)";</pre>
case 'g':
            break;
case 'y':
            cout<<" (Physics Practical)";</pre>
            break;
            cout<<" (Chemistry Practical)";</pre>
case 'z':
            break;
            cout<<" (Work Experience)";</pre>
case 'w':
            break;
```

```
cout<<" (Optional Subjects)";</pre>
                 case 'o':
                             break;
     }
     cout<<"\n\nPress any key to view further...";
     getch();
     clrscr();
void timetable::dperiod(int dy,int pno)
{
     cout<<"\nDay: ";
     //For displaying day
     switch(dy)
     {
           case o: cout<<"Monday";</pre>
                 break;
           case 1: cout<<"Tuesday";</pre>
                 break;
           case 2: cout<<"Wednesday";</pre>
                 break;
           case 3: cout<<"Thursday";</pre>
```

```
break;
     case 4: cout<<"Friday";</pre>
           break;
     case 5: cout<<"Saturday";</pre>
           break;
}
cout<<"\n\nPeriod "<<pno+1<<": "<<(char)(toupper(period[pno]));</pre>
//For displaying subjects
switch(period[pno])
{
                 cout << "(Physics) \n';
     case 'p':
                 break;
                 cout << "(Chemistry) \n';
     case 'c':
                 break;
     case 'm':
                 cout<<" (Maths/Library)\n\n";</pre>
                 break;
     case 'b':
                 cout<<" (Biology/Library)\n\n";</pre>
                 break;
     case 'e':
                 cout << " (English) \n ";
```

```
break;
           case 'g':
                       cout << " (Games) \ n \ ";
                       break;
                       cout<<" (Physics Practical)\n\n";</pre>
           case 'y':
                       break;
           case 'z':
                       cout<<" (Chemistry Practical)\n\n";</pre>
                       break;
           case 'w':
                       cout<<" (Work Experience)\n\n";</pre>
                       break;
           case 'o':
                       cout << " (Optional Subjects) \n\n";
                       break;
     }
}
void timetable::edit()
{
     //Previous stored subjects counter
     for(int i=0;i<8;i++)
     {
           if(period[i]=='p')
           p++;
```

```
else if(period[i]=='c')
     c++;
     else if(period[i]=='m')
     m++;
     else if(period[i]=='b')
     b++;
     else if(period[i]=='e')
     e++;
     else if(period[i]=='g')
     g++;
     else if(period[i]=='y')
     y++;
     else if(period[i]=='z')
     z++;
     else if(period[i]=='w')
     w++;
     else if(period[i]=='o')
     0++;
cout<<"Enter a new subject code: ";</pre>
resub:
cin>>period[periodno];
period[periodno]=tolower(period[periodno]);
if(period[periodno]=='p')
p++;
```

```
else if(period[periodno]=='c')
c++;
else if(period[periodno]=='m')
m++;
else if(period[periodno]=='b')
b++;
else if(period[periodno]=='e')
e++;
else if(period[periodno]=='g')
g++;
else if(period[periodno]=='y')
y++;
else if(period[periodno]=='z')
Z++;
else if(period[periodno]=='w')
w++;
else if(period[periodno]=='o')
0++;
//Max. 2 same subjects per day constraint
if(p>2)
{
     cout<<"Error!\n";</pre>
     cout<<"Subject has already been entered 2 times for the day!\n";</pre>
     cout<<"Re-enter the new subject code: ";</pre>
     --p;
```

```
goto resub;
}
if(c>2)
{
      cout<<"Error!\n";</pre>
      cout<<"Subject has already been entered 2 times for the day!\n";</pre>
      cout<<"Re-enter the new subject code: ";</pre>
      --c;
      goto resub;
}
if(m>2)
{
      cout<<"Error!\n";</pre>
      cout<<"Subject has already been entered 2 times for the day!\n";</pre>
      cout<<"Re-enter the new subject code: ";</pre>
      --m;
      goto resub;
}
if(b>2)
{
      cout<<"Error!\n";</pre>
      cout<<"Subject has already been entered 2 times for the day!\n";
      cout<<"Re-enter the new subject code: ";</pre>
      --b;
      goto resub;
```

```
}
if(e>2)
      cout<<"Error!\n";</pre>
      cout<<"Subject has already been entered 2 times for the day!\n";</pre>
      cout<<"Re-enter the new subject code: ";</pre>
      --e;
      goto resub;
if(g>2)
{
      cout<<"Error!\n";</pre>
      cout<<"Subject has already been entered 2 times for the day!\n";
      cout<<"Re-enter the new subject code: ";</pre>
      --g;
      goto resub;
}
if(y>2)
{
      cout<<"Error!\n";</pre>
      cout<<"Subject has already been entered 2 times for the day!\n";
      cout<<"Re-enter the new subject code: ";</pre>
      --y;
      goto resub;
```

```
if(z>2)
{
      cout<<"Error!\n";</pre>
      cout<<"Subject has already been entered 2 times for the day!\n";</pre>
      cout<<"Re-enter the new subject code: ";</pre>
      --Z;
      goto resub;
}
if(w>2)
{
      cout<<"Error!\n";</pre>
      cout<<"Subject has already been entered 2 times for the day!\n";
      cout<<"Re-enter the new subject code: ";</pre>
      --W;
      goto resub;
}
if(o>2)
{
      cout<<"Error!\n";</pre>
      cout<<"Subject has already been entered 2 times for the day!\n";</pre>
      cout<<"Re-enter the new subject code: ";</pre>
      --o;
      goto resub;
//Wrong input checker
```

```
switch(period[periodno])
{
     case 'p':
                 break;
                 break;
      case 'c':
                 break;
      case 'm':
      case 'b':
                 break;
                 break;
      case 'e':
     case 'g':
                 break;
      case 'y':
                 break;
      case 'z':
                 break;
                 break;
      case 'w':
      case 'o':
                 break;
                 cout<<"Wrong subject code!\n";</pre>
      default:
                 cout<<"Re-enter the subject code: ";</pre>
                 goto resub;
```

```
}
     cout << "\n";
     p=o;
     c=0;
     m=0;
     b=o;
     e=o;
     g=0;
     y=0;
     z=0;
     w=0;
     0=0;
}
void viewtable(); //View Entire table
void viewperiod(); //View a specific period
void viewrules();
                    //View Rules
void viewsubjects(); //View Subject Codes
void viewteachers(); //View Subject teachers
void newtable();
                    //Enter a new timetable
void autogenerate();
                      //Random Timetable Generator
void editperiod();
                    //Edit a specific period
int main()
{
     clrscr();
     ofstream file,tfile;
```

```
file.open("timetable.dat",ios::noreplace|ios::binary);
     int ch1,ch2,i;
     char ch='y';
     //If file doesn't exist, a new timetable is generated first
     if(file!=o)
          cout<<"\t\t\tTIMETABLE GENERATOR FOR SCIENCE\n\n";
          cout<<"Welcome to the Timetable Generator for Class XII
SCIENCE\n";
          cout << "\nAs this is your first run of the generator, let's set you
up\n";
          cout<<"\nChoose from the options below:-\n";</pre>
          cout<<"\n1. Enter a new timetable manually\n";
          cout<<"\n2. Generate a new random timetable\n";
          cout<<"\nEnter your choice: ";</pre>
          rech1:
          cin>>ch1;
          switch(ch1)
          {
                case 1:
                clrscr();
                viewrules();
                newtable();
                for(i=0;i<6;i++)
                {
```

```
file.write((char*)&day[i],sizeof(day[i]));
           }
           break;
            case 2:
            autogenerate();
           for(i=0;i<6;i++)
            {
                 file.write((char*)&day[i],sizeof(day[i]));
           break;
            default:
            cout<<"You entered the wrong choice!\n";</pre>
            cout<<"Enter your choice again: ";</pre>
            goto rech1;
      }
      cout<<"You are now setup to use the program.\n";</pre>
      cout<<"\nPress any key to continue...";</pre>
      getch();
file.close();
//Reading from file after timetable is generated or if it already exists
ifstream fio;
fio.open("timetable.dat",ios::in);
```

```
fio.seekg(o);
     for(i=0;i<6;i++)
     {
          fio.read((char*)&day[i],sizeof(day[i]));
     }
     fio.close();
     //Menu Driven Program
     do{
     file.open("timetable.dat",ios::noreplace|ios::binary);
     tfile.open("temp.dat",ios::binary);
     clrscr();
     cout << "\t\t\tTIMETABLE GENERATOR FOR SCIENCE\n\n";
     cout<<"Welcome to the Timetable Generator for Class XII
SCIENCE\n";
     cout << "\nChoose from the options below:-\n\n";
     cout << "1. View the timetable \n";
     cout<<"2. View a specific period\n";
     cout<<"3. View timetable creation rules\n";
     cout << "4. View subject codes \n";
     cout << "5. View teachers \n";
     cout << "6. Enter a new timetable \n";
     cout<<"7. Generate a new random timetable\n";
     cout << "8. Edit a specific period\n";
     cout << "9. Delete the entire timetable \n";
     cout << "10. Exit the program\n";
```

```
cout<<"\nEnter your choice: ";</pre>
rech2:
cin>>ch2;
switch(ch2)
{
     case 1:
     viewtable();
     break;
     case 2:
     viewperiod();
     break;
     case 3:
     clrscr();
     viewrules();
     break;
     case 4:
     clrscr();
     viewsubjects();
     break;
     case 5:
     clrscr();
```

```
viewteachers();
break;
case 6:
clrscr();
viewrules();
newtable();
for(i=0;i<6;i++)
     tfile.write((char*)&day[i],sizeof(day[i]));
file.close();
tfile.close();
remove("timetable.dat");
rename("temp.dat","timetable.dat");
break;
case 7:
autogenerate();
for(i=0;i<6;i++)
     tfile.write((char*)&day[i],sizeof(day[i]));
file.close();
tfile.close();
```

```
remove("timetable.dat");
rename("temp.dat","timetable.dat");
break;
case 8:
editperiod();
for(i=0;i<6;i++)
{
     tfile.write((char*)&day[i],sizeof(day[i]));
file.close();
tfile.close();
remove("timetable.dat");
rename("temp.dat","timetable.dat");
break;
case 9:
remove("timetable.dat");
cout << "\nFile deleted!\n\n";
cout<<"Press any key to continue...";</pre>
getch();
file.close();
tfile.close();
return o;
```

```
case 10:
           file.close();
           tfile.close();
           exit(o);
           break;
           default:
           cout<<"You entered the wrong choice!\n\n";</pre>
           cout<<"Enter your choice again: ";</pre>
           goto rech2;
     }
     file.close();
     tfile.close();
     cout<<"Enter menu again(y/n): ";</pre>
     cin>>ch;
     }while(ch=='y'||ch=='Y');
     return o;
}
void viewrules()//Timetable Rules
{
     cout<<"Rules for creating timetable:-\n\n";
     cout<<"1. There will be 8 periods per day and 6 days per week.\n\n";
     cout<<"2. The timings of the periods have been divided as
follows:\n';
     cout<<"
                      07:30 am - 08:00 am ASSEMBLY\n";
```

```
08:00 am - 08:40 am1st Period\n";
     cout<<"
     cout<<"
                      08:40 am - 09:20 am 2nd Period\n";
                      09:20 am - 10:00 am 3rd Period\n";
     cout<<"
                      10:00 am - 10:40 am 4th Period\n";
     cout<<"
     cout<<"
                      10:40 am - 11:00 am BREAK\n";
     cout<<"
                      11:00 am - 11:40 am 5th Period\n";
     cout<<"
                      11:40 am - 12:20 pm 6th Period\n";
     cout<<"
                      12:20 pm - 01:00 pm 7th Period\n";
                      01:00 pm - 01:40 pm 8th Period\n\n";
     cout<<"
     cout<<"3. You can't have more than two periods of the same subject on
the same day.\n'';
     cout<<"\nPress any key to view further...";
     getch();
     clrscr();
     cout << "4. Use the following subject codes for entering your
subjects:\n";
     viewsubjects();
void viewsubjects() //Subject Codes
{
     cout << "\nHere is the list of all the subject codes:-\n\n";
     cout<<"->Physics
                                                       P \setminus n";
     cout<<"->Chemistry
                                                       C \setminus n";
     cout<<"->Maths/Library
                                                            M \setminus n'';
     cout<<"->Biology/Library
                                                       B \setminus n'';
```

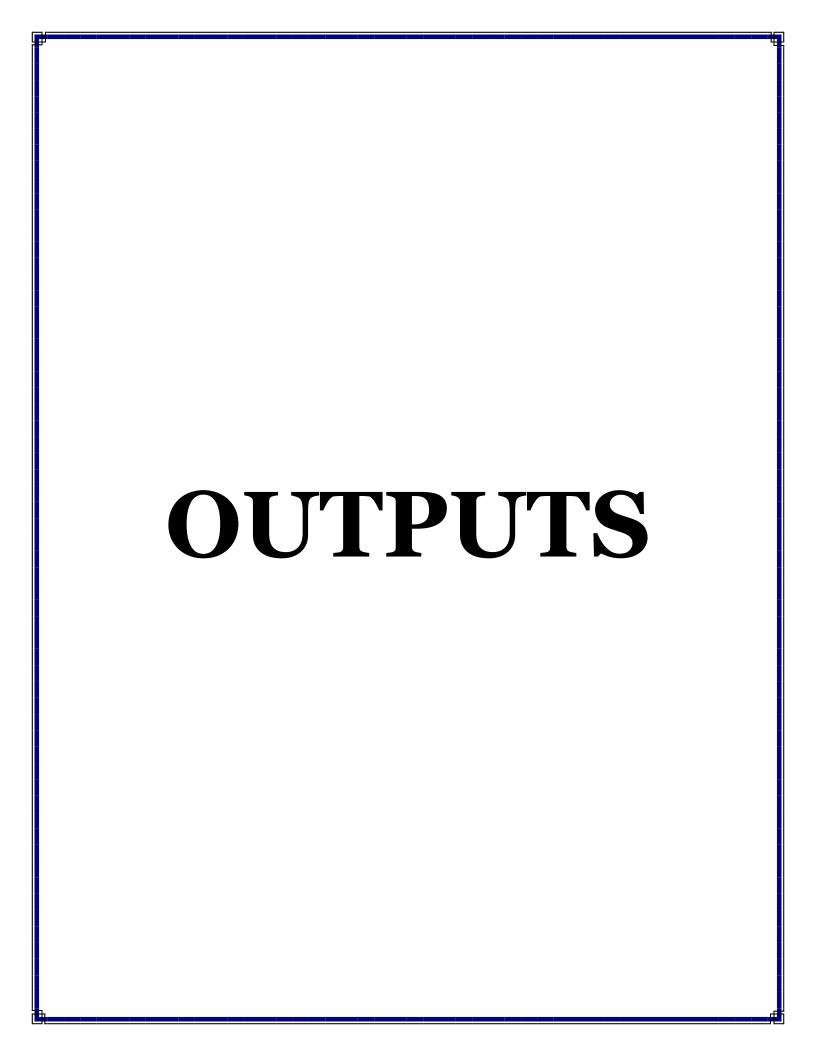
```
cout<<"->English
                                                      E \setminus n";
     cout<<"->Games
                                                           G\n'';
                                                           Y \ n";
     cout<<"->Physics Practical
     cout<<"->Chemistry Practical
                                                           Z \setminus n";
                                                            W \setminus n";
     cout<<"->Work Experience
     cout<<"->Optional Subjects (C.S., B.T., E.D., Economics) O\n\n";
}
void viewteachers() //Subject Teachers
{
     cout << "\nHere is the list of teachers for all the subjects:-\n\n";
     cout<<"->Physics
                                           Ms. Priyan'';
     cout << "-> Chemistry
                                           Ms. Shubhra\n";
     cout << "-> Maths
                                                 Ms. Sita\n";
     cout<<"->Biology
                                           Ms. Shakun\n";
                                           Ms. Rashmi\n";
     cout<<"->English
     cout << "-> Games
                                                 Mr. Vashisht\n";
     cout<<"->Physics Practical
                                                 Ms. Priyan'';
     cout<<"->Chemistry Practical
                                                 Ms. Shubhra\n";
     cout<<"->Work Experience
                                                 Ms. Neha\n";
                                           Ms. Neha\n";
     cout << "-> C.S.
     cout << "->B.T.
                                           Ms. Shakun\n";
     cout<<"->E.D.
                                           Mr. Vinod\n";
     cout << "-> Economics
                                           Ms. Nishun";
}
void newtable()
                    //Enter New Timetable
```

```
{
     cout<<"Enter a new timetable:-\n";</pre>
     for(int i=0;i<6;i++)
     {
           cout<<"\nDay "<<i+1<<":-\n";
           day[i].input();
           clrscr();
           viewsubjects();
     }
     clrscr();
}
void autogenerate() //Random Timetable Generator
{
     clrscr();
     randomize();
     cout<<"Generating a new random timetable:-\n";</pre>
     for(int i=0;i<6;i++)
     {
           day[i].randomgen();
     }
     cout<<"\nRandom timetable generated!\n\n";</pre>
void viewtable()//Timetable Viewer
{
     clrscr();
```

```
for(int i=0;i<6;i++)
{
      viewsubjects();
      cout<<"\nDay: ";
      switch(i)
      {
            case o: cout<<"Monday";</pre>
                  break;
            case 1: cout<<"Tuesday";</pre>
                  break;
            case 2: cout<<"Wednesday";</pre>
                  break;
            case 3: cout<<"Thursday";</pre>
                  break;
            case 4: cout<<"Friday";</pre>
                  break;
            case 5: cout<<"Saturday";</pre>
                  break;
      day[i].display();
```

```
}
void viewperiod() //Specific Period Viewer
{
     clrscr();
     int dy,pno;
     cout << "Select a day:-\n\n";
     cout<<"1. Monday\n";
     cout << "2. Tuesday\n";
     cout << "3. Wednesday \n";
     cout << "4. Thursday\n";
     cout<<"5. Friday\n";
     cout << "6. Saturday\n";
     cout<<"\nEnter your choice: ";</pre>
     reday:
     cin>>dy;
     if(dy<1||dy>6)
     {
           cout<<"Wrong choice!";</pre>
           cout<<"\nEnter your choice again: ";</pre>
           goto reday;
     }
     --dy;
     dayno=dy;
     cout<<"\nEnter Period number (1-8): ";</pre>
```

```
reperiod:
     cin>>pno;
     if(pno<1||pno>8)
     {
          cout<<"Wrong choice!";</pre>
          cout<<"\nEnter Period number again: ";</pre>
          goto reperiod;
     }
     --pno;
     periodno=pno;
     day[dy].dperiod(dy,pno);
void editperiod() //Specific Period Editor
{
     viewperiod();
     day[dayno].edit();
}
```



FIRST RUN: Option 1

TIMETABLE GENERATOR FOR SCIENCE

Welcome to the Timetable Generator for Class XII SCIENCE

As this is your first run of the generator, let's set you up

Choose from the options below:-

- Enter a new timetable manually
- 2. Generate a new random timetable

Enter your choice: 1_

Rules for creating timetable:-

- There will be 8 periods per day and 6 days per week.
- 2. The timings of the periods have been divided as follows:

```
07:30 \text{ am} - 08:00 \text{ am}
                           ASSEMBLY
08:00 am - 08:40 am
                           1st Period
08:40 am - 09:20 am
                           2nd Period
09:20 am - 10:00 am
                           3rd Period
10:00 am - 10:40 am
                           4th Period
10:40 am - 11:00 am
                           BREAK
11:00 am - 11:40 am
                           5th Period
11:40 am - 12:20 pm
                           6th Period
12:20 pm - 01:00 pm
                           7th Period
01:00 \text{ pm} - 01:40 \text{ pm}
                           8th Period
```

You can't have more than two periods of the same subject on the same day.

Press any key to view further...

```
Here is the list of all the subject codes:-
                                                          P
->Physics
                                                          C
->Chemistry
->Maths/Library
                                                          M
->Biology/Library
                                                          В
->English
                                                          E
->Games
                                                          G
                                                          Y
->Physics Practical
->Chemistry Practical
                                                          Z
->Work Experience
                                                          W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                          0
Enter a new timetable:-
Day 1:-
Enter the subject codes for:
Period 1: p
Period 2: c
Period 3: m
Period 4: b
Period 5: w
Period 6: o
Period 7: g
Period 8: z_
->Chemistry
                                                          C
```

```
->Maths/Library
                                                            М
                                                            В
->Biology/Library
->English
                                                            \mathbf{E}
->Games
                                                            G
                                                            Y
->Physics Practical
                                                            \mathbf{z}
->Chemistry Practical
                                                            W
->Work Experience
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                            0
Day 2:-
Enter the subject codes for:
Period 1: q
Period 2: g
Period 3: g
Error!
You entered a subject more than 2 times a day!
Re-enter the subject code for:-
Period 3: z
Period 4: y
Period 5: o
Period 6: m
Period 7: b
Period 8: w
```

```
->Physics
                                                          C
->Chemistry
                                                          М
->Maths/Library
                                                          В
->Biology/Library
                                                          E
->English
->Games
                                                          G
->Physics Practical
                                                          Y
->Chemistry Practical
                                                          Z
                                                          W
->Work Experience
                                                          0
->Optional Subjects (C.S., B.T., E.D., Economics)
Day 3:-
Enter the subject codes for:
Period 1: z
Period 2: z
Period 3: e
Period 4: c
Period 5: n
Wrong subject code!
Re-enter the subject code for:-
Period 5: o
Period 6: w
Period 7: y
Period 8: m
```

```
Here is the list of all the subject codes:-
                                                              P
->Physics
->Chemistry
                                                              C
->Maths/Library
                                                              М
->Biology/Library
                                                              В
->English
                                                              \mathbf{E}
->Games
                                                              \mathbf{G}
->Physics Practical
                                                              Y
->Chemistry Practical
                                                              \mathbf{z}
->Work Experience
                                                              W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                              0
Day 4:-
Enter the subject codes for:
Period 1: y
Period 2: z
Period 3: o
Period 4: w
Period 5: b
Period 6: e
Period 7: g
Period 8: g_
```

```
Here is the list of all the subject codes:-
                                                           P
->Physics
->Chemistry
                                                           C
->Maths/Library
                                                           М
                                                           В
->Biology/Library
->English
                                                           \mathbf{E}
->Games
                                                           G
                                                           Y
->Physics Practical
->Chemistry Practical
                                                           Z
->Work Experience
                                                           W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                           0
Day 5:-
Enter the subject codes for:
Period 1: p
Period 2: p
Period 3: m
Period 4: b
Period 5: b
Period 6: g
Period 7: z
Period 8: w
```

```
Here is the list of all the subject codes:-
->Physics
                                                             P
->Chemistry
                                                             C
->Maths/Library
                                                             М
->Biology/Library
                                                             В
                                                             \mathbf{E}
->English
->Games
                                                             G
->Physics Practical
                                                             Y
->Chemistry Practical
                                                             \mathbf{z}
->Work Experience
                                                             W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                             0
Day 6:-
Enter the subject codes for:
Period 1: o
Period 2: w
Period 3: m
Period 4: b
Period 5: z
Period 6: y
Period 7: g
Period 8: g_
```

	4
You are now setup to use the program.	
Press any key to continue	

FIRST RUN: Option 2

TIMETABLE GENERATOR FOR SCIENCE

Welcome to the Timetable Generator for Class XII SCIENCE

As this is your first run of the generator, let's set you up

Choose from the options below:-

- 1. Enter a new timetable manually
- 2. Generate a new random timetable

Enter your choice: 2_

Generating a new random timetable:-

Random timetable generated!

You are now setup to use the program.

Press any key to continue...

TIMETABLE GENERATOR FOR SCIENCE

<u>Welcome to the Timetable Generator for Class XII SCIENCE</u>

Choose from the options below:-

- View the timetable
- View a specific period
- 3. View timetable creation rules
- View subject codes
- 5. View teachers
- 6. Enter a new timetable
- Generate a new random timetable
- 8. Edit a specific period
- Delete the entire timetable

Period 8: B (Biology/Library)

Press any key to view further...

10. Exit the program

Enter your choice: 1_

```
Here is the list of all the subject codes:-
                                                          P
->Physics
->Chemistry
->Maths/Library
                                                          М
>Biology/Library
                                                          В
->English
                                                          E
                                                          G
->Games
                                                          Y
->Physics Practical
                                                          Z
->Chemistry Practical
->Work Experience
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                          0
Day: Monday
Period 1: M (Maths/Library)
Period 2: O (Optional Subjects)
Period 3: M (Maths/Library)
Period 4: G (Games)
Period 5: Y (Physics Practical)
Period 6: G (Games)
Period 7: B (Biology/Library)
```

```
Here is the list of all the subject codes:-
                                                          P
->Physics
                                                          C
->Chemistry
                                                          M
->Maths/Library
->Biology/Library
                                                          В
->English
                                                          E
->Games
                                                          G
                                                          Y
->Physics Practical
->Chemistry Practical
                                                          Z
->Work Experience
                                                          W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                          0
Day: Tuesday
Period 1: Y (Physics Practical)
Period 2: C (Chemistry)
Period 3: W (Work Experience)
Period 4: M (Maths/Library)
Period 5: C (Chemistry)
Period 6: B (Biology/Library)
Period 7: 0 (Optional Subjects)
Period 8: E (English)
Press any key to view further...
```

```
Here is the list of all the subject codes:-
                                                          P
->Physics
->Chemistry
                                                          C
->Maths/Library
                                                          М
->Biology/Library
                                                          В
->English
                                                          E
->Games
                                                          G
                                                          Υ
->Physics Practical
                                                          Z
->Chemistry Practical
->Work Experience
                                                          W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                          0
Day: Wednesday
Period 1: B (Biology/Library)
Period 2: Z (Chemistry Practical)
Period 3: G (Games)
Period 4: C (Chemistry)
Period 5: O (Optional Subjects)
Period 6: G (Games)
Period 7: E (English)
Period 8: P (Physics)
Press any key to view further...
```

```
Here is the list of all the subject codes:-
                                                          P
->Physics
                                                          C
->Chemistry
                                                          M
->Maths/Library
->Biology/Library
                                                          В
->English
                                                          E
->Games
                                                          G
->Physics Practical
                                                          Y
->Chemistry Practical
                                                          Z
->Work Experience
                                                          W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                          0
Day: Thursday
Period 1: 0 (Optional Subjects)
Period 2: M (Maths/Library)
Period 3: Y (Physics Practical)
Period 4: W (Work Experience)
Period 5: B (Biology/Library)
Period 6: P (Physics)
Period 7: W (Work Experience)
Period 8: Z (Chemistry Practical)
Press any key to view further...
```

```
Here is the list of all the subject codes:-
->Physics
                                                          P
->Chemistry
                                                          C
->Maths/Library
                                                          М
->Biology/Library
                                                          В
->English
                                                          E
->Games
                                                          G
                                                          Υ
->Physics Practical
                                                          Z
->Chemistry Practical
->Work Experience
                                                          W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                          0
Day: Friday
Period 1: G (Games)
Period 2: E (English)
Period 3: B (Biology/Library)
Period 4: P (Physics)
Period 5: G (Games)
Period 6: W (Work Experience)
Period 7: W (Work Experience)
Period 8: Y (Physics Practical)
Press any key to view further...
```

```
Here is the list of all the subject codes:-
                                                             P
 ->Physics
->Chemistry
                                                             C
->Maths/Library
                                                             M
->Biology/Library
                                                             В
->English
                                                             \mathbf{E}
                                                             G
->Games
                                                             Y
->Physics Practical
->Chemistry Practical
                                                             Z
->Work Experience
                                                             W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                             0
Day: Saturday
Period 1: C (Chemistry)
Period 2: O (Optional Subjects)
Period 3: G (Games)
Period 4: B (Biology/Library)
Period 5: B (Biology/Library)
Period 6: Y (Physics Practical)
Period 7: E (English)
Period 8: E (English)
Press any key to view further...
```

Ellter.	menu	ayarıı	yziiz. y				
							_

TIMETABLE GENERATOR FOR SCIENCE

Welcome to the Timetable Generator for Class XII SCIENCE

Choose from the options below:-

- View the timetable
- View a specific period
- 3. View timetable creation rules
- 4. View subject codes
- 5. View teachers
- 6. Enter a new timetable
- 7. Generate a new random timetable
- 8. Edit a specific period
- Delete the entire timetable
- 10. Exit the program

Enter your choice: 2_

Select a day:-

- Monday
- 2. Tuesday
- Wednesday
- 4. Thursday
- 5. Friday
- 6. Saturday

Enter your choice: 3

Enter Period number (1–8): 5

Day: Wednesday

Period 5: O (Optional Subjects)

Enter menu again(y/n): y_

TIMETABLE GENERATOR FOR SCIENCE

<u>Welcome to the Timetable Generator for Class XII SCIENCE</u>

Choose from the options below:-

- View the timetable
- View a specific period
- View timetable creation rules
- 4. View subject codes
- 5. View teachers
- 6. Enter a new timetable
- Generate a new random timetable
- 8. Edit a specific period
- Delete the entire timetable
- 10. Exit the program

Enter your choice: 3

Rules for creating timetable:-

- There will be 8 periods per day and 6 days per week.
- 2. The timings of the periods have been divided as follows:

```
07:30 \text{ am} - 08:00 \text{ am}
                           ASSEMBLY
08:00 am - 08:40 am
                           1st Period
                           2nd Period
08:40 am - 09:20 am
09:20 am - 10:00 am
                           3rd Period
10:00 am - 10:40 am
                           4th Period
10:40 am - 11:00 am
                           BREAK
11:00 am - 11:40 am
                           5th Period
11:40 am - 12:20 pm
                           6th Period
12:20 pm - 01:00 pm
                           7th Period
01:00 \text{ pm} - 01:40 \text{ pm}
                           8th Period
```

You can't have more than two periods of the same subject on the same day.

Press any key to view further... $_$

```
4. Use the following subject codes for entering your subjects:
Here is the list of all the subject codes:-
->Physics
                                                              P
->Chemistry
                                                              \mathbf{c}
->Maths/Library
                                                              М
->Biology/Library
->English
                                                              В
                                                              E
->Games
                                                              \mathbf{G}
->Physics Practical
                                                              Y
->Chemistry Practical
                                                              Z
->Work Experience
                                                              W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                              0
Enter menu again(y/n): y
```

TIMETABLE GENERATOR FOR SCIENCE

Welcome to the Timetable Generator for Class XII SCIENCE

Choose from the options below:-

- 1. View the timetable
- View a specific period
- 3. View timetable creation rules
- View subject codes
- 5. View teachers
- 6. Enter a new timetable
- Generate a new random timetable
- 8. Edit a specific period
- 9. Delete the entire timetable
- 10. Exit the program

Enter your choice: 4

Here is the list of all the subject codes:-

->Physics	P				
->Chemistry	C				
->Maths/Library	M				
->Biology/Library	В				
->English	\mathbf{E}				
->Games	\mathbf{G}				
->Physics Practical	Y				
->Chemistry Practical					
->Work Experience	W				
->Optional Subjects (C.S., B.T., E.D., Economics)	0				

Enter menu again(y/n): y

TIMETABLE GENERATOR FOR SCIENCE

Welcome to the Timetable Generator for Class XII SCIENCE

Choose from the options below:-

- 1. View the timetable
- View a specific period
- 3. View timetable creation rules
- 4. View subject codes
- 5. View teachers
- 6. Enter a new timetable
- 7. Generate a new random timetable
- 8. Edit a specific period
- Delete the entire timetable
- 10. Exit the program

Enter your choice: 5

Here is the list of teachers for all the subjects:-

- ->Physics
- ->Chemistry
- ->Maths
- −>Biology
- ->English
- ->Games
- ->Physics Practical
- ->Chemistry Practical
- ->Work Experience
- ->C.S.
- ->B.T.
- ->E.D.
- ->Economics

- Ms. Priya
- Ms. Shubhra
- Ms. Sita
- Ms. Shakun
- Ms. Rashmi
- Mr. Vashisht
- Ms. Priya
- Ms. Shubhra
- Ms. Neha
- Ms. Neha
- Ms. Shakun
- Mr. Vinod
- Ms. Nishu

Enter menu again(y/n): y

TIMETABLE GENERATOR FOR SCIENCE

<u>Welcome to the Timetable Generator for Class XII SCIENCE</u>

Choose from the options below:-

- View the timetable
- View a specific period
- View timetable creation rules
- 4. View subject codes
- 5. View teachers
- 6. Enter a new timetable
- Generate a new random timetable
- 8. Edit a specific period
- Delete the entire timetable
- 10. Exit the program

Enter your choice: 6

Rules for creating timetable:-

- There will be 8 periods per day and 6 days per week.
- 2. The timings of the periods have been divided as follows:

```
ASSEMBLY
07:30 \text{ am} - 08:00 \text{ am}
08:00 am - 08:40 am
                           1st Period
                           2nd Period
08:40 am - 09:20 am
09:20 am - 10:00 am
                           3rd Period
10:00 am - 10:40 am
                           4th Period
10:40 am - 11:00 am
                           BREAK
11:00 am - 11:40 am
                           5th Period
11:40 am - 12:20 pm
                           6th Period
12:20 pm - 01:00 pm
                           7th Period
01:00 \text{ pm} - 01:40 \text{ pm}
                           8th Period
```

You can't have more than two periods of the same subject on the same day.

Press any key to view further...

```
->Maths/Library
                                                            М
->Biology/Library
                                                            В
->English
                                                            \mathbf{E}
->Games
                                                            G
->Physics Practical
                                                            Y
->Chemistry Practical
                                                            \mathbf{z}
->Work Experience
                                                            W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                            0
Enter a new timetable:-
Dau 1:-
Enter the subject codes for:
Period 1: p
Period 2: c
Period 3: m
Period 4: b
Period 5: e
Period 6: g
Period 7: g
Period 8: q
Error!
You entered a subject more than 2 times a day!
Re-enter the subject code for:-
Period 8: y_
```

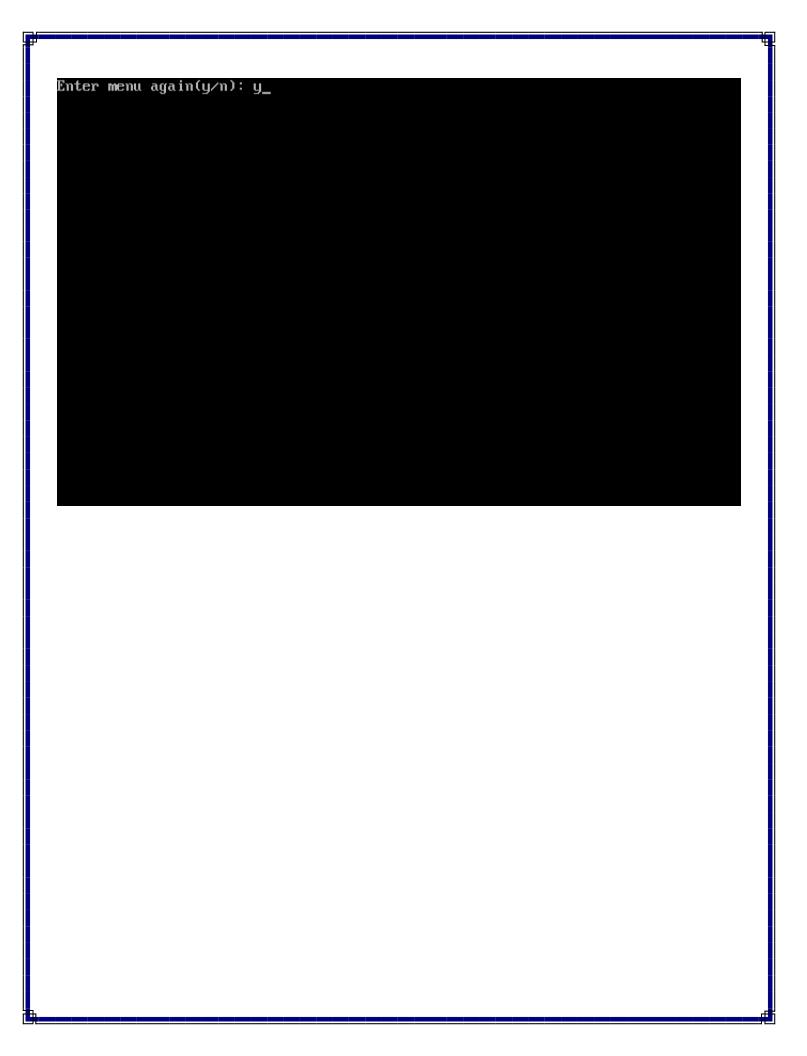
```
->English
                                                            \mathbf{E}
->Games
                                                            G
->Phusics Practical
                                                            Y
->Chemistry Practical
                                                            \mathbf{z}
->Work Experience
                                                            W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                            0
Day 2:-
Enter the subject codes for:
Period 1: q
Period 2: q
Period 3: u
Wrong subject code!
Re-enter the subject code for:-
Period 3: m
Period 4: p
Period 5: c
Period 6: m
Period 7: q
Error!
You entered a subject more than 2 times a day!
Re-enter the subject code for:-
Period 7: z
Period 8: w_
```

```
Here is the list of all the subject codes:-
                                                           P
->Physics
->Chemistry
                                                           C
->Maths/Library
                                                           М
                                                           В
->Biology/Library
->English
                                                           \mathbf{E}
->Games
                                                           G
                                                           Y
->Physics Practical
->Chemistry Practical
                                                           Z
->Work Experience
                                                           W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                           0
Day 3:-
Enter the subject codes for:
Period 1: p
Period 2: c
Period 3: q
Period 4: o
Period 5: w
Period 6: y
Period 7: w
Period 8: z
```

```
Here is the list of all the subject codes:-
->Physics
                                                             P
->Chemistry
                                                             C
->Maths/Library
                                                             М
->Biology/Library
                                                             В
                                                             \mathbf{E}
->English
->Games
                                                             G
->Physics Practical
                                                             Y
->Chemistry Practical
                                                             \mathbf{z}
->Work Experience
                                                             W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                             0
Day 4:-
Enter the subject codes for:
Period 1: p
Period 2: g
Period 3: q
Period 4: b
Period 5: b
Period 6: m
Period 7: m
Period 8: e_
```

```
Here is the list of all the subject codes:-
                                                           P
->Physics
->Chemistry
                                                           C
->Maths/Library
                                                           М
                                                           В
->Biology/Library
->English
                                                           \mathbf{E}
->Games
                                                           G
                                                           Y
->Physics Practical
->Chemistry Practical
                                                           Z
->Work Experience
                                                           W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                           0
Day 5:-
Enter the subject codes for:
Period 1: o
Period 2: p
Period 3: e
Period 4: q
Period 5: g
Period 6: y
Period 7: w
Period 8: z
```

```
Here is the list of all the subject codes:-
->Physics
                                                              P
->Chemistry
                                                              C
->Maths/Library
                                                              М
->Biology/Library
                                                              В
                                                              \mathbf{E}
->English
->Games
                                                              \mathbf{G}
->Physics Practical
                                                              Y
->Chemistry Practical
                                                              \mathbf{z}
->Work Experience
                                                              W
->Optional Subjects (C.S., B.T., E.D., Economics)
                                                              0
Day 6:-
Enter the subject codes for:
Period 1: p
Period 2: p
Period 3: c
Period 4: c
Period 5: m
Period 6: m
Period 7: g
Period 8: g_
```



TIMETABLE GENERATOR FOR SCIENCE

Welcome to the Timetable Generator for Class XII SCIENCE

Choose from the options below:-

- View the timetable
- View a specific period
- 3. View timetable creation rules
- View subject codes
- 5. View teachers
- 6. Enter a new timetable
- Generate a new random timetable
- 8. Edit a specific period
- 9. Delete the entire timetable
- 10. Exit the program

Enter your choice: 7_

Generating a new random timetable:-

Random timetable generated!

Enter menu again(y/n): y

TIMETABLE GENERATOR FOR SCIENCE

Welcome to the Timetable Generator for Class XII SCIENCE

Choose from the options below:-

- 1. View the timetable
- View a specific period
- View timetable creation rules
- 4. View subject codes
- View teachers
- 6. Enter a new timetable
- 7. Generate a new random timetable
- 8. Edit a specific period
- Delete the entire timetable
- 10. Exit the program

Enter your choice: 8_

Select a day:-

- Monday
- 2. Tuesday
- Wednesday
- 4. Thursday
- 5. Friday
- 6. Saturday

Enter your choice: 6

Enter Period number (1–8): 4

Day: Saturday

Period 4: C (Chemistry)

Enter a new subject code: s

Wrong subject code!

Re-enter the subject code: g

Enter menu again(y∕n): y

TIMETABLE GENERATOR FOR SCIENCE

Welcome to the Timetable Generator for Class XII SCIENCE

Choose from the options below:-

- View the timetable
- 2. View a specific period
- 3. View timetable creation rules
- 4. View subject codes
- 5. View teachers
- 6. Enter a new timetable
- 7. Generate a new random timetable
- 8. Edit a specific period
- 9. Delete the entire timetable
- 10. Exit the program

Enter your choice: 9

File deleted!

Press any key to continue...

TIMETABLE GENERATOR FOR SCIENCE

Welcome to the Timetable Generator for Class XII SCIENCE

Choose from the options below:-

- View the timetable
- View a specific period
- 3. View timetable creation rules
- 4. View subject codes
- 5. View teachers
- 6. Enter a new timetable
- 7. Generate a new random timetable
- 8. Edit a specific period
- 9. Delete the entire timetable
- 10. Exit the program

Enter your choice: 10_

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