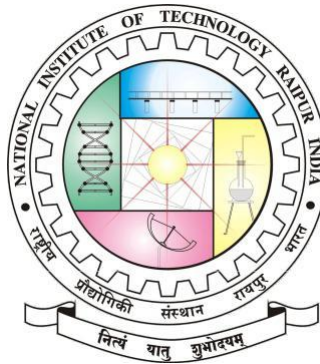# National Institute Of Technology, Raipur

Term-Project-Report

on

"**School Report Card Generator**"

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Acknowledgment

At the very outset of this report. I would like to extend my sincere & heartfelt obligations towards all the personage who has helped me in this endeavor. Without their active guidance, help, cooperation & encouragement, I would not have made headway in the project.

I would like to express my special thanks of gratitude to my teacher **" Sheekha Babar "** for your guidance and support and also this College **" NIT Raipur "** for giving me the golden opportunity to do this wonderful project on the topic "School Report Card 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 them.

Secondly, I would also like to thank my Parents and Friends who helped me a lot in Finishing this Project within a Limited time.

- Vivek Kumar

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Abstract

The sole intention behind the consideration of this project is to generate and manage the work of Report Card Generation Simply and Efficiently. This Project is developed considering The Report card generation with keeping the context of the work of Teachers in Mind. Here, Data of the Student is Stored and Printed on the Screen as Well as Printable File (.doc) Format for the Ease of Analysing and Sharing the Progress Report of a Student.

Contents

Introduction

This "School Report Card Generator" Project is Designed for generating the Annual Report card of a Student Digitally, it can also be used for generating Semi-annually/Weekly Periodically Report card of a Student with some Modification in the Code.

Once we enter all the Details, The Marks, percentage, and Details of the Student are automatically generated by the software on the Screen as well as in the Printable Document File Format(.doc).

In this Software, I had included many Features like-

- ❖ Well Designed and Interactive user Interface.

- ❖ The instruction page is Included at HomePage, where you can see all the Instructions to Operate this C++ Software.

- ❖ You don't have to press Enter Button while Entering your Choice.

- ❖ you have to Enter the Marks of 6 Compulsory subjects first then you can add more Subjects (with their marks) as much as you can.

- ❖ Printable (.doc) File is generated automatically with Parent's sign, Teacher's sign, and Remarks section in them.

- ❖ Space between Texts is Managed with Code in Both Console output as well as in doc file.

Requirements

Hardware : Any Laptop or PC having minimum specifications(4GB RAM recommended) with Storage and Operating System Supporting C++ IDE.

Software : Dev C++ or Code::Blocks or VS Code with Mingw Compiler.

Note :- This Program will not Run on Older versions of C++ Compiler like Turbo C++.

Source Code

```cpp
//Program Made By Vivek Kumar (21111071) BME'25 on "School Report Card Generator".

#include<iostream>
#include<stdio.h>
#include<conio.h>
#include<fstream>
#include<string>
#include<iomanip>
using namespace std;

char dash='-';

void line();
void headline();
void message();

class Run
{
  private:

    string sub[40] = {"Maths","Physics","Basic-Biomed","Data-Structure","Computer-
programming","Environment-&-Ecology" };
    int enroll;
    char name[40]={0};
    float percentage,marks[40]={0},total;
    char more;
    int slen,i,j,k,a,b,x;

  public:

      void input()
      {
        //Input Taking Starts .......

          cout<<"Please Enter the Details of the Student Below ! \n";
          line();
          cout<<"Name of the Student : ";
          cin.getline(name,40);
          cout<<"Enrollment Number of the Student : ";
          cin>>enroll;
          line();
```

```cpp
            cout<<"Enter the Marks of Compulsary Subjects Below !\n\n";
            for (int x = 0; x < 6; x++){
                cout <<"\nEnter the Marks of "<<sub[x] <<":  ";
                cin>>marks[x];
            }

            do{
                cout<<"\n\nDo You Want to Enter More Subjects (Y/N) : ";
                {
                more=getche();
                 //  char ch=more;
                  x=6;
                  while(more=='y'|| more=='Y')
                  {
                    system("cls");
                    headline();
                    cout<<"\n\n\t\tENTER THE Name and Marks Details of Additional Subject :- ";
                    cout<<"\n\n\n\t\tEnter the "<<x+1<<"th Subject Name : ";
                    cin>>(sub[x]);
                    cout<<"\n\t\tEnter the Marks of \'"<<sub[x]<<"\' Subject : ";
                    cin>>marks[x];
                       x++;
                    cout<<"\n\n\n\t\tDo you want to add more Subjects (y/n) :  ";
                    more=getche();
                  }
                }

            }while(more=='y'|| more=='Y');
        }

    void output()
    {
     total=0;
     for(a=1;a<=x;a++)
     {
      total=total+marks[a-1];
     }
     percentage=(total/x);
      //Console Output Printing Starts.........
      system("cls");
      headline();
      cout<<"Name of the Student : "<<name<<endl;
      cout<<"Enrollment Number : "<<enroll<<"\t\t\t\tYear : 2021-2025"<<endl;
      line();
      cout<<"SL.No\t"<<"Subject\t\t\t"<<"\t\tFull Marks\t"<<"  Marks Obtained\n";
      line();
     for(i=0;i<=x-1;i++)
     {
       slen=sub[i].length();
       if(slen>0 && slen<8){
```

```cpp
            cout<<endl<<" "<<i+1<<"\t"<<sub[i]<<"\t\t\t\t\t  "<<100<<"\t\t\t"<<marks[i]<<endl;
        }
        else if (slen>7 && slen<16){
            cout<<endl<<" "<<i+1<<"\t"<<sub[i]<<"\t\t\t\t  "<<100<<"\t\t\t"<<marks[i]<<endl;
        }
        else if (slen>15 && slen<24){
            cout<<endl<<" "<<i+1<<"\t"<<sub[i]<<"  \t\t\t  "<<100<<"\t\t\t"<<marks[i]<<endl;
        }
        else {
            cout<<endl<<" "<<i+1<<"\t"<<sub[i]<<"  \t\t  "<<100<<"\t\t\t"<<marks[i]<<endl;
        }
    }
    line();
    cout<<"\n\nTotal number of Subjects : "<<x;
    cout<<"\nTotal Marks : "<<total<<" Out of "<<x*100;
    cout<<"\n% Marks Obtained : "<<setprecision(3)<<percentage<<"%";
    cout<<"\n\nRemarks : ";
    cout<<"\n\n\n\n\tParent's Sign";
    cout<<"\t\t\t\t\tClass Tearcher's Sign\n";
    cout<<"\n\n\n\t\t*****  Best wishes For your Future !  *****";

    //Now Console Input & OutPut ends and File Output Starts..........

    {
        ofstream fout;
        fout.open("Report_card.doc",ios::out);
        fout<<setw(72)<<setfill('-')<<dash<<endl;
        fout<<"\t\t\t\t\t Annual Report Card \n";
        fout<<setw(72)<<setfill('-')<<dash<<endl;
        fout<<endl<<"\t\t\t\tNational Institute of Technology ";
        fout<<endl<<"\t\t\t\t\t  G.E. Road,Raipur";
        fout<<endl<<"\t\t\t\t\t\t 492010"<<endl;
        //
    fout<<setw(72)<<setfill('-')<<dash<<endl;
    fout<<"Name of the Student is : "<<name<<endl;
    fout<<"Enrollment Number : "<<enroll<<"\t\t\t\tYear : 2021-2025"<<endl;
    fout<<setw(72)<<setfill('-')<<dash<<endl;
    fout<<"SL.No\t"<<"Subject\t\t\t\t\t"<<"Full Marks "<<"  \tMarks Obtained\n";
    fout<<setw(72)<<setfill('-')<<dash<<endl;
    for(i=0;i<=x-1;i++)
    {
        slen=sub[i].length();
        if(slen>0 && slen<6){
        fout<<endl<<" "<<i+1<<"\t"<<sub[i]<<"\t\t\t\t\t\t\t"<<100<<"\t\t\t"<<marks[i]<<endl;
        }
        else if (slen>5 && slen<12){
        fout<<endl<<" "<<i+1<<"\t"<<sub[i]<<"\t\t\t\t\t\t"<<100<<"\t\t\t"<<marks[i]<<endl;
        }
        else if (slen>11 && slen<18){
        fout<<endl<<" "<<i+1<<"\t"<<sub[i]<<"\t\t\t\t\t"<<100<<"\t\t\t"<<marks[i]<<endl;
```

```cpp
        }
        else if (slen>17 && slen<25){
        fout<<endl<<" "<<i+1<<"\t"<<sub[i]<<"\t\t\t\t"<<100<<"\t\t\t"<<marks[i]<<endl;
        }
        else {
        fout<<endl<<" "<<i+1<<"\t"<<sub[i]<<"\t\t\t"<<100<<"\t\t\t"<<marks[i]<<endl;
        }
      }
     fout<<setw(72)<<setfill('-')<<dash<<endl;
     fout<<"\nTotal number of Subjects : "<<x;
     fout<<"\nTotal Marks : "<<total<<" Out of "<<x*100;
     fout<<"\nPercentage marks obtained : "<<setprecision(3)<<percentage<<"%";
     fout<<"\n\nRemarks: ";
     fout<<setw(72)<<setfill('_')<<dash<<"\n\n";
     fout<<"\n\n\tParent's Sign"<<"\t\t\t\t\t\tClass Teacher's Sign"<<endl;
     fout<<setw(72)<<setfill('-')<<dash<<endl;
     fout<<"\t\t\t\t  We Wish Best For Your Future"<<endl;
     fout<<setw(72)<<setfill('-')<<dash<<endl;
     fout<<"\n\t\t\t\t *****  Learn and Serve  *****";
  }
}



};


int main()
{
    //  int choice=0;
    Run r;
     char choice='y';
     while(choice=='y'||choice=='Y')
  {
   system("cls");
   cout<<"\n\n\n";
   cout<<"'''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''"<<endl;
   cout<<"                                                                       "<<endl;
   cout<<" _____   "<<endl;
   cout<<" _____   "<<endl;
   cout<<"                                                                       "<<endl;
   cout<<"     *         * * * * *         * * * *  * * * *  *      *   * * * *   "<<endl;
   cout<<"     *         *   *             *         *       *   * *  ** *  *     "<<endl;
   cout<<"     *         *   *             *         *       * *  *   *   *       "<<endl;
   cout<<"     *    *    * * * *   *       *         *       * *  *    *   * * *   "<<endl;
   cout<<"     *  * *  * *         *       *         *       * *       * *         "<<endl;
   cout<<"     * *     * * *       *       *         *       * *       * *         "<<endl;
   cout<<"     *         * * * * *  * * * *  * * * *  * * * *  *      *   * * * *   "<<endl;
   cout<<" _____   "<<endl;
   cout<<" _____   "<<endl;
   cout<<"                                                                       "<<endl;
```

```cpp
    cout<<"      PLEASE CHOOSE ANY OPTION FROM BELOW, THEN PRESS THE KEY.....           "<<endl;
    cout<<"      _____            _____                               "<<endl;
    cout<<"         [Y] Make Report-Card              [N] EXIT                           "<<endl;
    cout<<"         ~~~~~~~~~~~~~~~~~~~              ~~~~~~~~                             "<<endl;
    cout<<"         _____                                                     "<<endl;
    cout<<"         [I] INSTRUCTIONS                                                     "<<endl;
    cout<<"         ~~~~~~~~~~~~~~~~                                                      "<<endl;
    cout<<"''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''"<<endl;

      choice=getche();
     {
      if(choice=='y'||choice=='Y')
       {
          system("cls");
          headline();
          r.input();
          r.output();
       }
       if(choice=='i'||choice=='I')
       {
          system("cls");
          message();
          choice='y';
       }

       else{
          exit (0);
       }
     }

    getch();
   }
    return 0;
}

void line()
{
    cout<<setw(85)<<setfill('-')<<dash<<endl;
}

void headline()
{
    line();
    cout<<"\t\t\t\tAnnual Report Card \n";
    line();
    cout<<endl<<"\t\t\t  National Institute of Technology ";
    cout<<endl<<"\t\t\t\t G.E. Road,Raipur";
    cout<<endl<<"\t\t\t\tChattisgarh-492010"<<endl;
    line();
}
```

```cpp
void message()
{
    headline();
    cout<<"\n\n\t INSTRUCTIONS TO THE Report Card Generator ";
    cout<<"\n\n\n\t1. When You are Ready to Make Report-Card ,PRESS 'Y' in Welcome Screen.";
    cout<<"\n\n\t2. Enter the Details of Student CAREFULLY ";
    cout<<"\n\n\t3. Enter the Marks of 6 Compulsary Subjects. ";
    cout<<"\n\n\t4. Add Extra Subjects and Marks if You Want. ";
    cout<<"\n\n\t5. Do not Use Space in Subject Name, Use Special Characters Instead ";
    cout<<"\n\n\t6. Share or Print the \"Report_card.docx\" File Generated in same Folder. ";
    cout<<"\n\n\n\n\t\t Kindly Press any button to Continue.......... ";
}
```

***** The Source Code Ends Here ! *****

Working and Output

➔ When the Software Starts Home/Welcome Screen will appear first like below.

➔ You will be Given Three options (Make Report-Card), (Instructions), and (Exit).

➔ Press i or I to read the instructions of use of this Software then press any key, you will be redirected to the same Welcome Screen.

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL


..................................................................................


-------------------------------------------------------------------------------
-------------------------------------------------------------------------------

     *        *   * * * *   *              * * * *   * * * *   *           *   * * * *
     *        *   *         *              *         *         *   * *     * *   *
     *        *   *         *              *         *         *   *   *     *   *
     *   *    *   * * *     *              *         *         *   *           *   * * *
     *  * *   * * *         *              *         *         *   *           *   *
     * *   *  * *  *        *              *         *         *   *           *   *
     *        *   * * * *   * * * *        * * * *   * * * *   *           *   * * * *

-------------------------------------------------------------------------------
-------------------------------------------------------------------------------

     PLEASE CHOOSE ANY OPTION FROM BELOW, THEN PRESS THE KEY.....

        _____                    _____
        [Y] Make Report-Card                       [N] EXIT
        ~~~~~~~~~~~~~~~~~~~~~~~~~                    ~~~~~~~~~~

        _____
        [I] INSTRUCTIONS
        ~~~~~~~~~~~~~~~~~~~~
....................................................................................
▌
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL

-----------------------------------------------------------------------
                         Annual Report Card
-----------------------------------------------------------------------

                     National Institute of Technology
                            G.E. Road,Raipur
                          Chattisgarh-492010
-----------------------------------------------------------------------


       INSTRUCTIONS TO THE Report Card Generator


      1. When You are Ready to Make Report-Card ,PRESS 'Y' in Welcome Screen.

      2. Enter the Details of Student CAREFULLY

      3. Enter the Marks of 6 Compulsary Subjects.

      4. Add Extra Subjects and Marks if You Want.

      5. Do not Use Space in Subject Name, Use Special Characters Instead

      6. Share or Print the "Report_card.doc" File Generated in same Folder.



                Kindly Press any button to Continue........... █
```

➔ Press n or N, if you want to Exit from here and Close the Program.
➔ Press y or Y to begin the Process of Report card Making, you will see the
   Screen like Below.

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL


-------------------------------------------------------------------------
                          Annual Report Card
-------------------------------------------------------------------------

                      National Institute of Technology
                             G.E. Road,Raipur
                           Chattisgarh-492010
-------------------------------------------------------------------------
Please Enter the Details of the Student Below !
-------------------------------------------------------------------------
Name of the Student : █
```

➔ First Enter the Basic Details of the Student then The Marks of the Compulsory Subjects.

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL


----------------------------------------------------------------------------
                            Annual Report Card
----------------------------------------------------------------------------

                        National Institute of Technology
                              G.E. Road,Raipur
                              Chattisgarh-492010
----------------------------------------------------------------------------
Please Enter the Details of the Student Below !
----------------------------------------------------------------------------
Name of the Student : Vivek Kumar
Enrollment Number of the Student : 21111071
----------------------------------------------------------------------------
Enter the Marks of Compulsary Subjects Below !


Enter the Marks of Maths:   90

Enter the Marks of Physics:   88

Enter the Marks of Basic-Biomed:   86

Enter the Marks of Data-Structure:   92

Enter the Marks of Computer-programming:   91

Enter the Marks of Environment-&-Ecology:   94


Do You Want to Enter More Subjects (Y/N) : ▌
```

➔ Now if you want to Add more Subjects with their Marks, simply press y or Y, otherwise, Press n or N to Proceed.

➔ If you will press n or N, you will get the Result on the Console and the same Result Format of 6 compulsory subjects in doc file with Name "Report_card.doc" in the same folder.

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL


-----------------------------------------------------------------------------
                            Annual Report Card
-----------------------------------------------------------------------------


                        National Institute of Technology
                                G.E. Road,Raipur
                                Chattisgarh-492010
-----------------------------------------------------------------------------
Name of the Student : Vivek Kumar
Enrollment Number : 21111071                        Year : 2021-2025
-----------------------------------------------------------------------------
SL.No   Subject                         Full Marks          Marks Obtained
-----------------------------------------------------------------------------

    1       Maths                           100                 90

    2       Physics                         100                 88

    3       Basic-Biomed                    100                 86

    4       Data-Structure                  100                 92

    5       Computer-programming            100                 91

    6       Environment-&-Ecology           100                 94
-----------------------------------------------------------------------------


Total number of Subjects : 6
Total Marks : 541 Out of 600
% Marks Obtained : 90.2%

Remarks :




        Parent's Sign                               Class Tearcher's Sign



            *****  Best wishes For your Future !  *****
PS C:\Users\VIVEK KUMAR\OneDrive\Documents\cpp_program> █
```

➔ If you will press y or Y, you will move to the next screen where you can add as
    many Extra subjects as you want. Simply by pressing y or Y.

```
-------------------------------------------------------------------------
                          Annual Report Card
-------------------------------------------------------------------------

                      National Institute of Technology
                            G.E. Road,Raipur
                           Chattisgarh-492010
-------------------------------------------------------------------------


          ENTER THE Name and Marks Details of Additional Subject :-


          Enter the 7th Subject Name : Sports

          Enter the Marks of 'Sports' Subject : 96



          Do you want to add more Subjects (y/n) :  ▉
```

➔ If You want to add more press y or Y and add as many subjects as you want with their corresponding marks.

```
-------------------------------------------------------------------------
                          Annual Report Card
-------------------------------------------------------------------------

                      National Institute of Technology
                            G.E. Road,Raipur
                           Chattisgarh-492010
-------------------------------------------------------------------------


          ENTER THE Name and Marks Details of Additional Subject :-


          Enter the 8th Subject Name : Communications

          Enter the Marks of 'Communications' Subject : 92



          Do you want to add more Subjects (y/n) :  ▉
```

➔ When you end with the number of Subjects, Press n or N and you will get the Result of the Student on the Console as well as in the doc file named "Report_card.doc" in the same Folder.

```
--------------------------------------------------------------------------------
                               Annual Report Card
--------------------------------------------------------------------------------

                          National Institute of Technology
                               G.E. Road,Raipur
                               Chattisgarh-492010
--------------------------------------------------------------------------------
Name of the Student : Vivek Kumar
Enrollment Number : 21111071                        Year : 2021-2025
--------------------------------------------------------------------------------
SL.No    Subject                          Full Marks       Marks Obtained
--------------------------------------------------------------------------------

 1       Maths                                100                90

 2       Physics                              100                88

 3       Basic-Biomed                         100                86

 4       Data-Structure                       100                92

 5       Computer-programming                 100                91

 6       Environment-&-Ecology                100                94

 7       Sports                               100                96

 8       Communications                       100                92

 9       Arts                                 100                87

10       Extra-Curricular-Activities          100                85

11       Discipline                           100                86
--------------------------------------------------------------------------------


Total number of Subjects : 11
Total Marks : 987 Out of 1100
% Marks Obtained : 89.7%

Remarks :



         Parent's Sign                          Class Tearcher's Sign



              *****  Best wishes For your Future !  *****
PS C:\Users\VIVEK KUMAR\OneDrive\Documents\cpp_program> 
```

➔Now you will get the Automatically Generated Report card like This.

```
--------------------------------------------------------------------------
                         Annual Report Card
--------------------------------------------------------------------------

                    National Institute of Technology
                         G.E. Road,Raipur
                              492010
--------------------------------------------------------------------------
The name of the Student is : Vivek Kumar
Enrollment Number : 21111071                  Year : 2021-2025
--------------------------------------------------------------------------
SL.No Subject                       Full Marks      Marks Obtained
--------------------------------------------------------------------------

  1    Maths                           100              90

  2    Physics                         100              88

  3    Basic-Biomed                    100              86

  4    Data-Structure                  100              92

  5    Computer-programming            100              91

  6    Environment-&-Ecology           100              94

  7    Sports                          100              96

  8    Communications                  100              92

  9    Arts                            100              87

 10    Extra-Curricular-Activities     100              85

 11    Discipline                      100              86
--------------------------------------------------------------------------

Total number of Subjects : 11
Total Marks : 987 Out of 1100
Percentage marks obtained : 89.7%

Remarks:
_____-



      Parent's Sign                              Class Teacher's Sign
--------------------------------------------------------------------------
                    We Wish Best For Your Future
--------------------------------------------------------------------------

                 *****  Learn and Serve  *****
```

Conclusion

The Report Card Generator Software can Manage a Large Number of Records of Results of Students while generating the Result and Storing and Sharing the Result in Physical Format in a very well Documented Manner.

 With Some Customization, it can be used in many ways in Different Situations.

Thus, This Software has many applications in real life.

References

https://youtube.com/playlist?list=PLu0W_9lII9agpFUAlPFe_VNSlXW5uE0YL

COMPUTER PROGRAMING BIO-MEDICAL   A (google.com)

Links

This Project is Uploaded to my Github Account.