Marking Scheme

Informatics College Pokhara

informatics
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Application Development

CS6004NI

Course Work 1

Submitted By: **Yaman Thapa**
London Met ID: Enter ID Here

Submitted To: Ishwor Sapkota
Module Leader

Component Grade and Comments	
A. Implementation of Application	
User Interface and proper controls used for designing	User Interface is complete but not separated and have proper use of controls
Manual data entry or import from csv	appropriate use of data types but missing some properties required or missing CRUD operation
Data Validation	missing most of the validation
Enrollment Report & weekly report in tabular format	very poorly executed reports and data not shown accurately
Course wise enrollment report & Chart display	Very poorly designed and only contains one report format with in appropriate data
Algorithm used for sorting & proper sorting of data	Default sorting provided by .net is used
B. Documentation	
User Manual for running the application	User Manual is below average. Is textual only.

Application architecture & description of the classes ad methods sued	average work with very limited explanation of the classes and methods used
Flow chart, algoriathms and data sctructures used	average work with very limited explanation and missing diagramatic representation.
Reflective essay	Very poorly written

C. Programming Style

Clarity of code,Popper Naming convention & comments	very poorly written code and no comments at all
System Usability	very poorly developed application

Overall Grade:	**D**	**D**

Overall Comment:

Code should be self explainable with less comments. Need some proper naming of the component and require to add comments on required area.

In overall the code is working and all the functionality seems working and system can be used

Module Code & Module Title
CS6004NA
Application Development

Assessment Weightage & Type
30% Individual Coursework-1

Year and Semester
2018-19 Autumn

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College ID: NP04CP4A170016
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1. Abstract

This is an individual course work for the module “Application Development” related to the student information System which is developed using Visual Studio Platform using C# language. The coursework is released in week 5 and it is supposed to be submitted in week 11.

With the great contribution of Mr. Ishwor sapkota the course work was completed within the time frame of the module and the code for the module is CS6004NA.

2. Introduction

The designed system is based on the student information System. The system is highly designed, developed and tested under various circumstances. The features and functions that are required by the organization are almost fulfilled by the developed system. It consist of feature for the entry of the new student which is registered in the form which consist of basic information of the student such as first name, last name, parent name , permanent address and soon. In addition to this features the email id, phone number and the student id must be validated and the login is also validated and if there is the false entry of the data it gives certain information to the user that the process of login is not validated .In login page the user also can select the gender as well the program that the student are enrolled besides all those there are there main buttons in the login page which are quit, reset as well as register.

In the coursework we need to do certain task which is really beneficial as well as top task for us which makes us brain storm our mind in these course work we need to perform certain task such as we need to write the XML file without using database furthermore we need to read CSV file along with this we need to sort the files data in ascending or descending order. In addition to this we also need to show the weekly report of the student registration system and also manage to make a graphical representation of the weekly report.

2.1 Current Scenario

There are numerous organization who keep record of their data in old traditional system which is Paper-Based System. In addition to that, there are some organization which are keeping some information in modern way but lacking many key features but after the development of these system there will be proper record of the student information system.

2.2 Proposed System

The proposed system is digitized system which is specially designed to overcome problem mentioned above. The system ensures security with the presence of login section. Entry of data and display of data have been made easy with the presence of easy user-interface along with pop up message in case of false entry and also the valid entry in the login page is obligatory.

3. Open Screen Management by Visual studio

Figure 1: Open screen management by Visual studio

Here, the figure shows the location of Student Management application. This 'Student Management' application is inside Users folder of Local Disk(C) and is opened using Visual Studio.

4. Login Screen

There are various screenshots below which will illustrate a user how to operate the system.

As the end user operates the system the initial screen will be the security screen. The username and password of the system is "y". Only a valid username and password can provide access to the system and the pop-up message for the invalid message is displayed besides it there is also exit and login button which helps to exit and login into further pages.

Figure 2: Login screen

5. Invalid login

Figure 3: Login screen with invalid input

When there is invalid input in the login screen it shows the pop up message as displayed in the screen so the false entry of unwanted user is not granted.

5Home screen

The second page of the coursework requirement is the home screen with the design of register new student, register bulk from file, view register student , view chart and view weekly report furthermore there are log out as well as exit button which helps to further processed the task which is shown below with the help of screenshot.

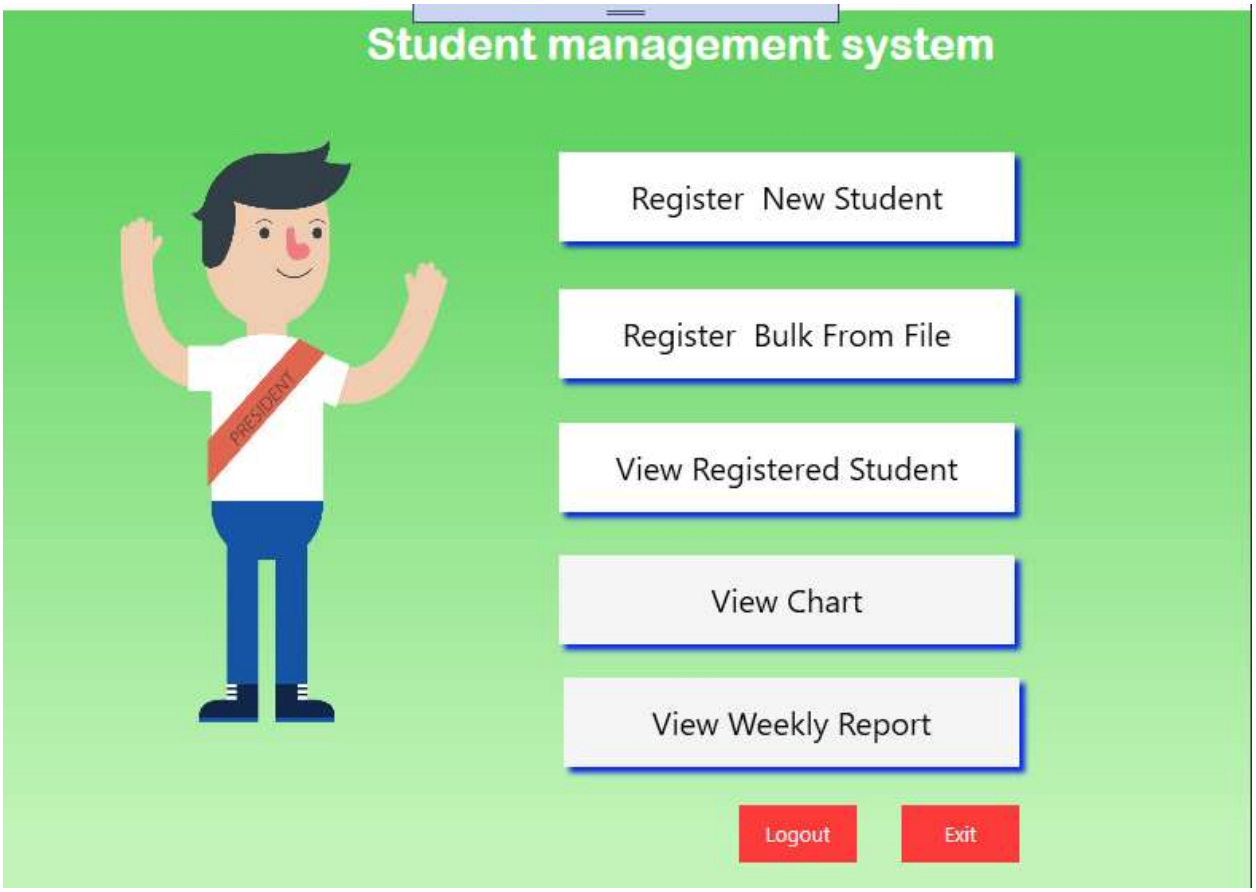


Figure 4: Home screen

6. Register new student

The figure below shows the registration of the new student with various information to be inserted and to be registered the student registration from usually shows the first name, Id number, Parent number, student phone, program as well as gender besides this all the parent phone address and the email address should also be mentioned and the email address must be validate otherwise there won't be registration the screen shot of the program is mentioned below.

Figure 5: Student registration form

7. Inserting data in registration form

For the registration of the data the user must register the data into the form for example in the registration form there are various questions to be field and the data is saved into the XML file and with the help of it the report and chart is generated. Besides there are three main buttons of quit, register and reset.

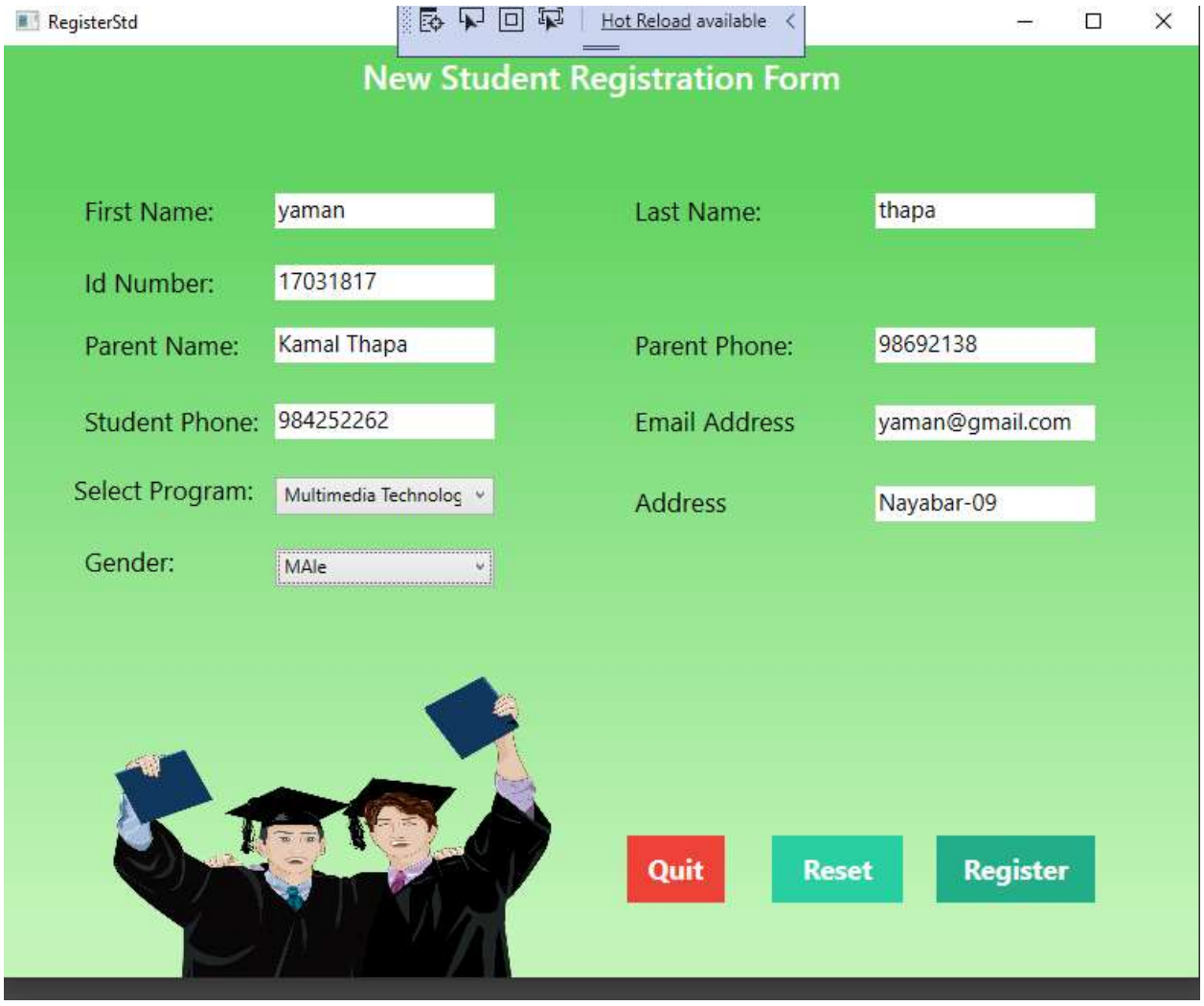


Figure 6: Inserting data in student form

8. Pop up message for successful registration

After the successful registration of the student a pop-up message is generated with the small message of successful validation which is shown below in the picture.

Figure 7: Pop up message for successful registration

9. Register bulk from file

The student may also need to be added from the file for this we need to create a CSV file and also give a path for CSV file and the CSV file is also shown on the report in order to go into the bulk file first we need to login and select register from bulk file and we need to add the file from the path given the file can be chosen from selecting the choose button.

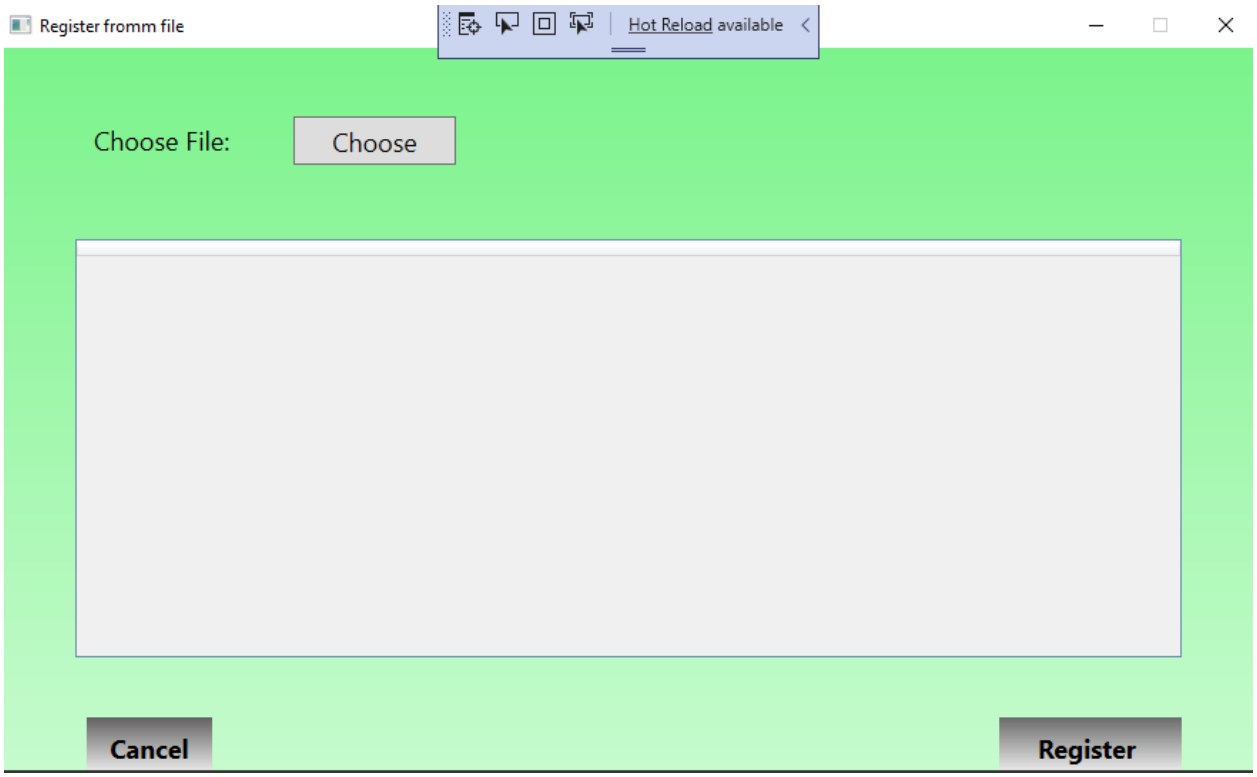


Figure 8: Register bulk from file

10. Inserting data into bulk file

The file is inserted into the bulk file with name, student id, parent name, parent phone, student phone, email, program address as well as gender and region along with the time.

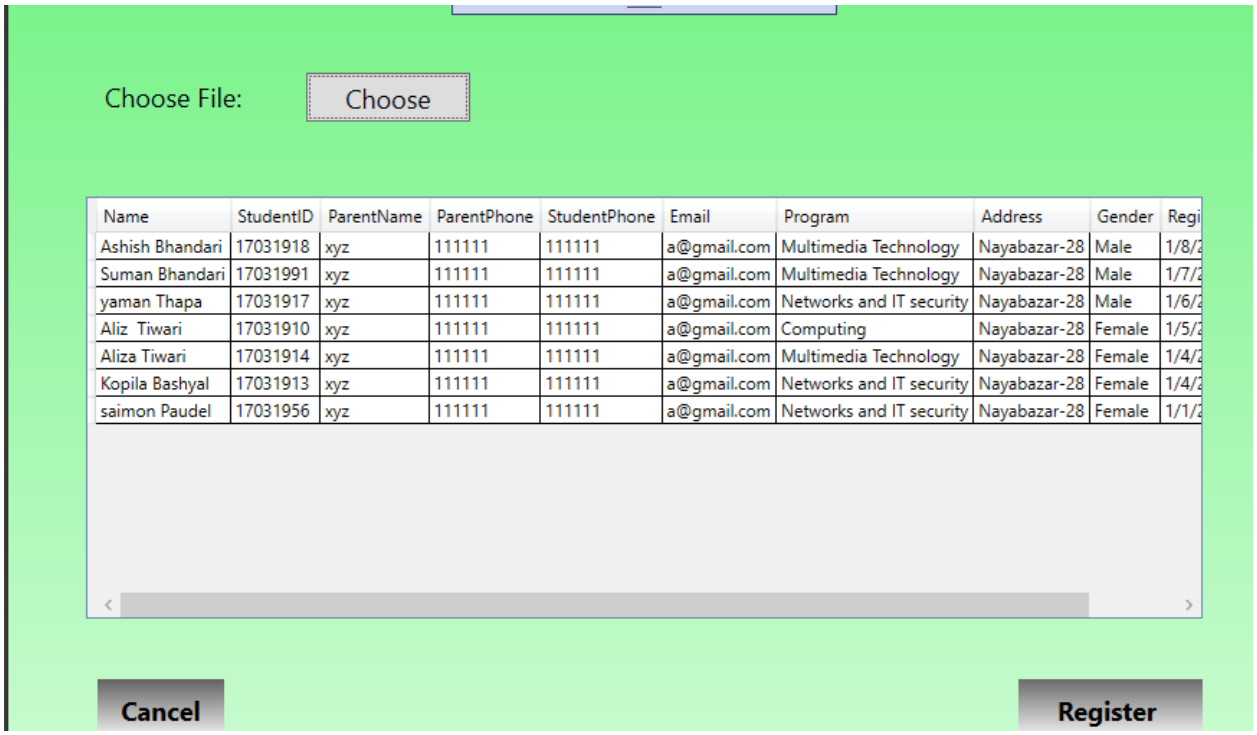


Figure 9: Inserting data into bulk file

11. Validation of Bulk file

After inserting the file in the bulk file along with name, student id, parent name, parent phone, student phone, email, program address as well as gender and region along with the time a pop up message is generated with the pop up message which is displayed below.

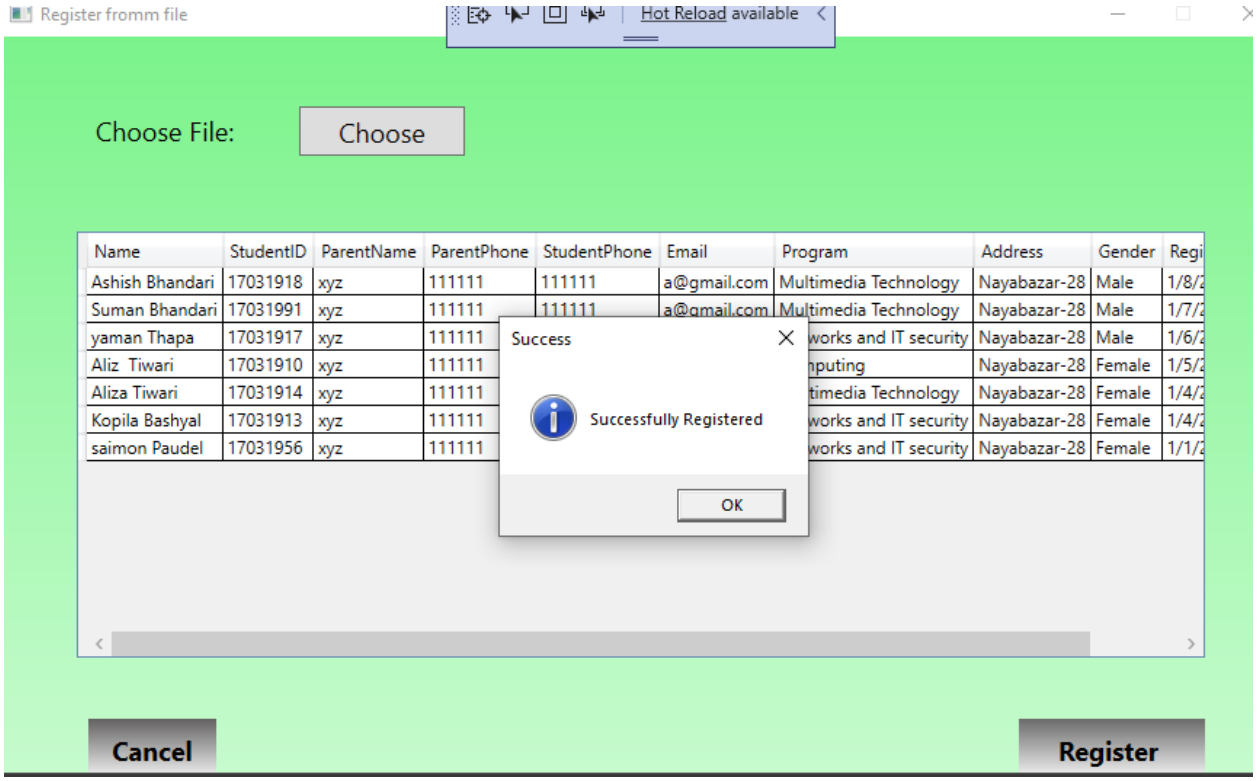


Figure 10: Validation message of Bulk file

12. Sorting of student registration by student name

The student is registered by the student name in accordance to the alphabetical way for instance the name starting with A is shown at the begging and the name starting with Y is shown in last which is shown in the figure below.

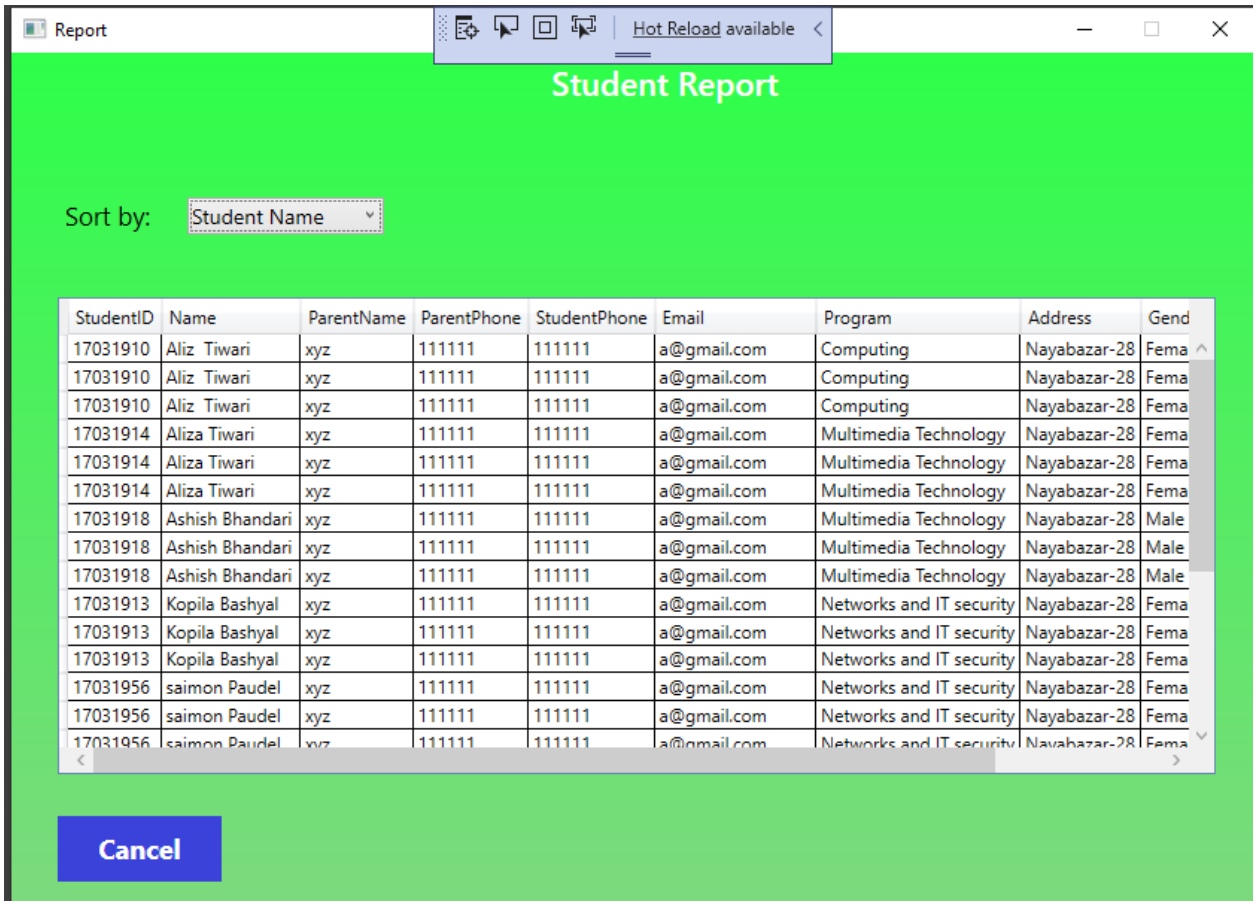
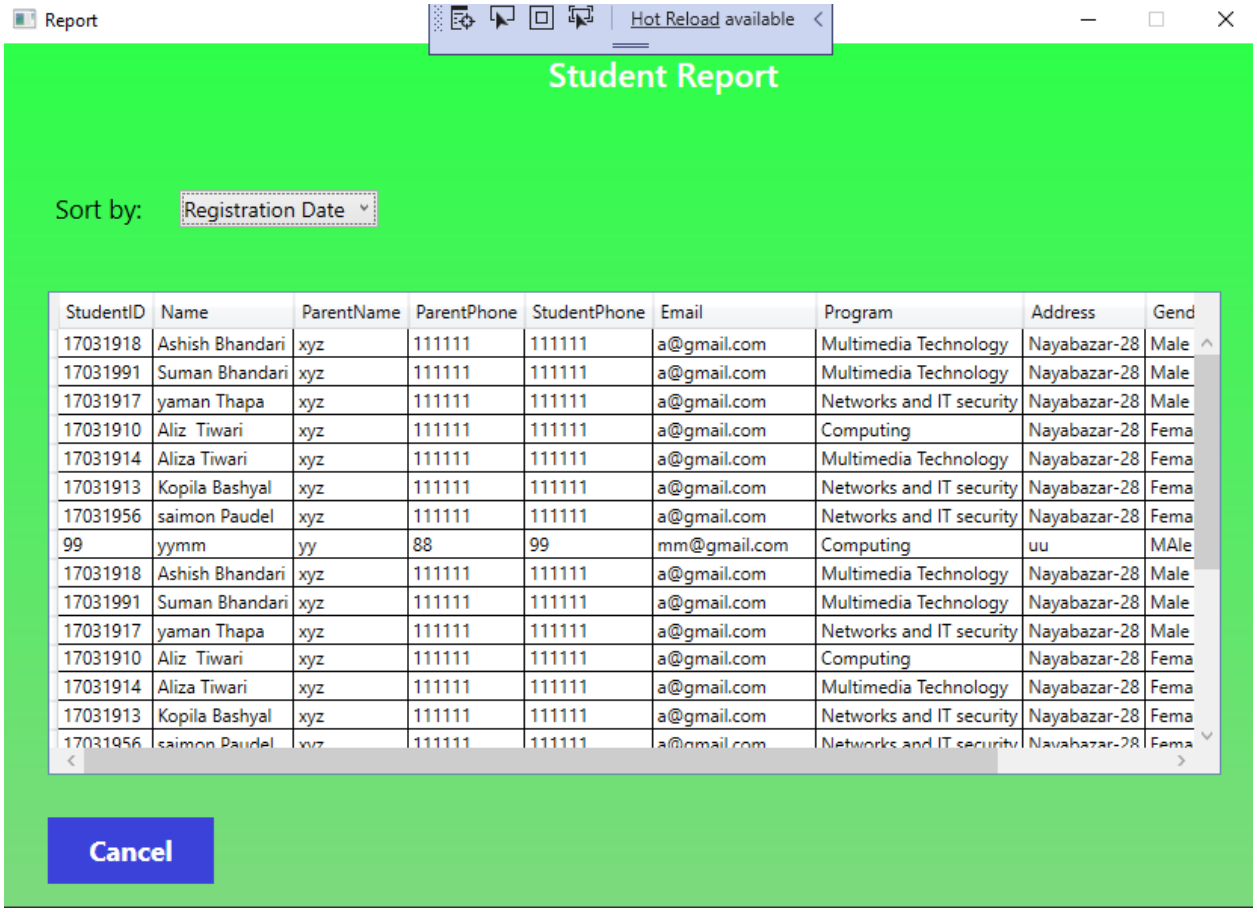


Figure 11: Sorting of student registration by student name

13. Sorting student by time

In the figure below the student registered are sort by time in accordance to the data entered by the user at the beginning the name of the student is Ashish Bhandari and at the end the name of the student is saimon poudel so the data are managed in accordance to the date.



StudentID	Name	ParentName	ParentPhone	StudentPhone	Email	Program	Address	Gend
17031918	Ashish Bhandari	xyz	111111	111111	a@gmail.com	Multimedia Technology	Nayabazar-28	Male
17031991	Suman Bhandari	xyz	111111	111111	a@gmail.com	Multimedia Technology	Nayabazar-28	Male
17031917	yaman Thapa	xyz	111111	111111	a@gmail.com	Networks and IT security	Nayabazar-28	Male
17031910	Aliz Tiwari	xyz	111111	111111	a@gmail.com	Computing	Nayabazar-28	Fema
17031914	Aliza Tiwari	xyz	111111	111111	a@gmail.com	Multimedia Technology	Nayabazar-28	Fema
17031913	Kopila Bashyal	xyz	111111	111111	a@gmail.com	Networks and IT security	Nayabazar-28	Fema
17031956	saimon Paudel	xyz	111111	111111	a@gmail.com	Networks and IT security	Nayabazar-28	Fema
99	yymm	yy	88	99	mm@gmail.com	Computing	uu	MAle
17031918	Ashish Bhandari	xyz	111111	111111	a@gmail.com	Multimedia Technology	Nayabazar-28	Male
17031991	Suman Bhandari	xyz	111111	111111	a@gmail.com	Multimedia Technology	Nayabazar-28	Male
17031917	yaman Thapa	xyz	111111	111111	a@gmail.com	Networks and IT security	Nayabazar-28	Male
17031910	Aliz Tiwari	xyz	111111	111111	a@gmail.com	Computing	Nayabazar-28	Fema
17031914	Aliza Tiwari	xyz	111111	111111	a@gmail.com	Multimedia Technology	Nayabazar-28	Fema
17031913	Kopila Bashyal	xyz	111111	111111	a@gmail.com	Networks and IT security	Nayabazar-28	Fema
17031956	saimon Paudel	xyz	111111	111111	a@gmail.com	Networks and IT security	Nayabazar-28	Fema

Figure 12: Sorting student by time

14. Weekly Report

The report shows the overall students enrolled into different sectors such as computing, multimedia and technology as well as network and IT security till date the students enrolled in different sectors are 4,10 and 9 respectively.

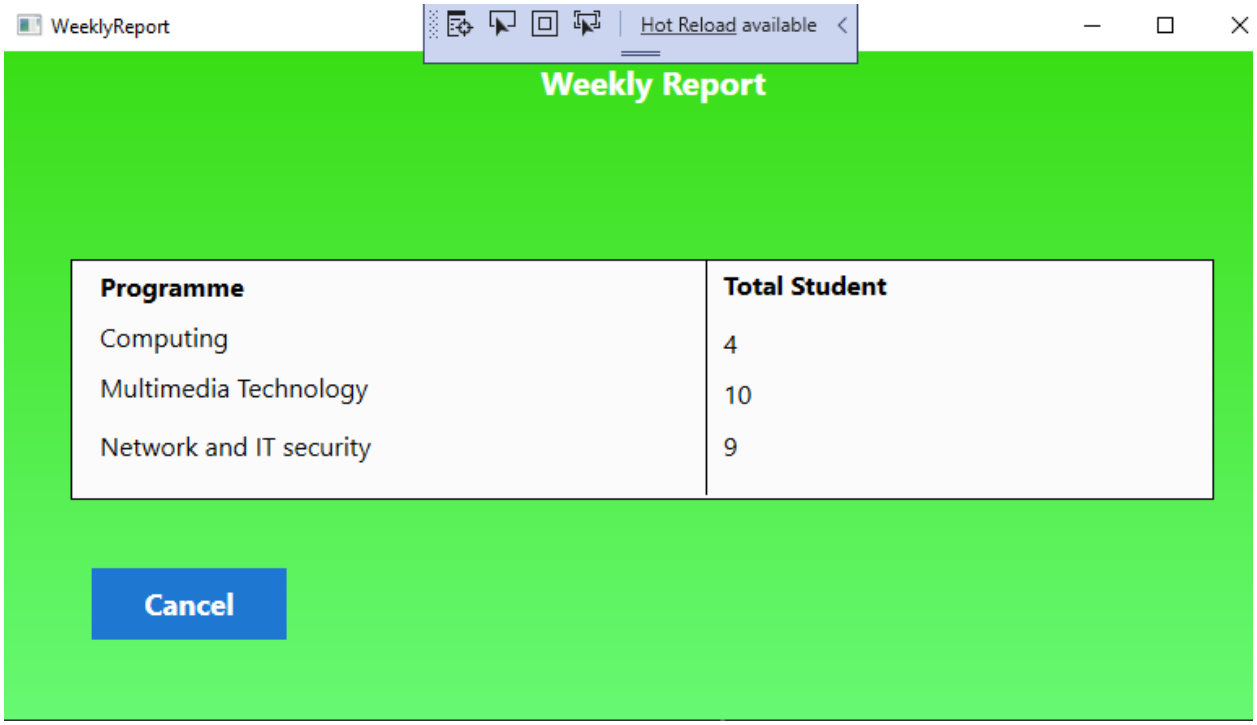


Figure 13: Weekly report of the students

15. Graphical representation of students

The graphical representation of the weekly report of the students is shown on the chart below:

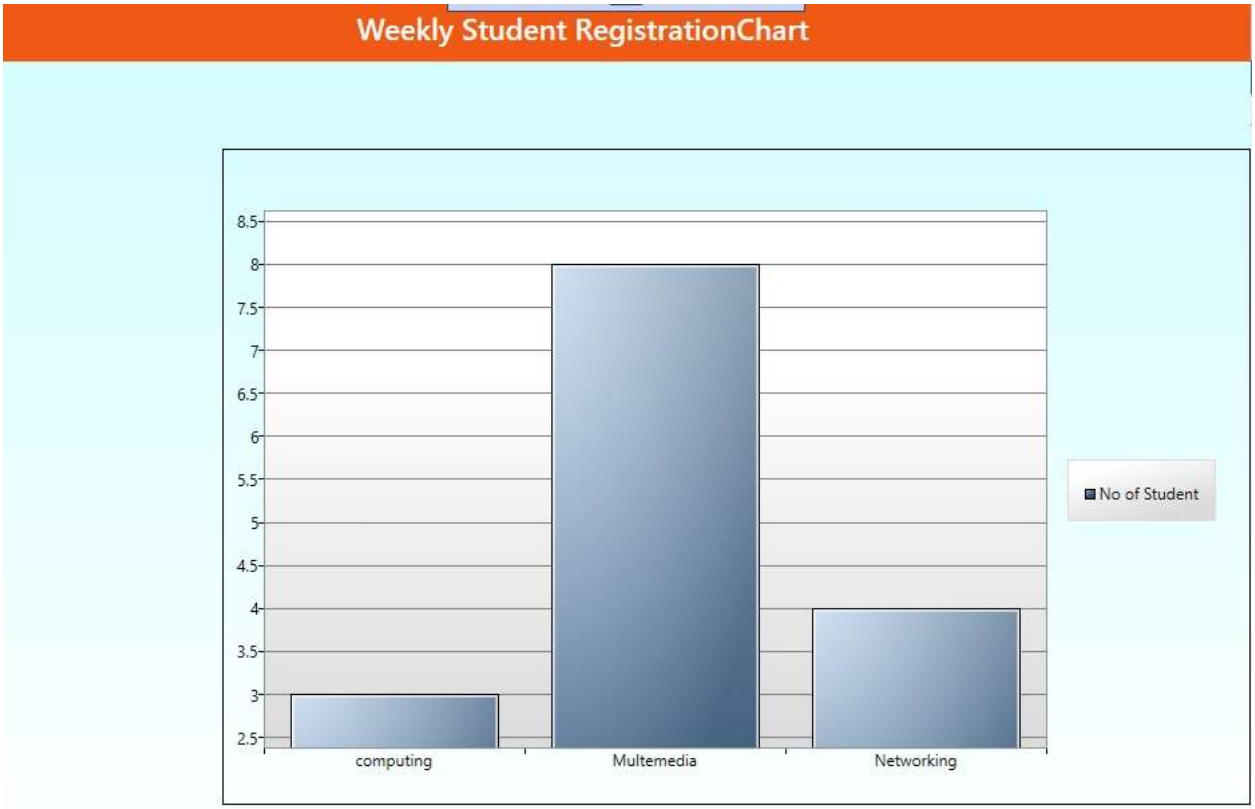


Figure 14: Graphical representation of information of students

16. Journals

1. With advanced technology, it seems, comes more and more paperwork. Ironically, this is exactly the opposite of the "paperless society" predicted for years. Fortunately for educators, there are some products available right now that help ease paperwork-intensitive tasks. Keeping detailed records of each and every student's grades, class schedules and personal information - including medical, parental and disciplinary information - has long been the bane of educators everywhere. Now add the monumental task of keeping all such records updated district-wide. And every year seems to bring even more regulations and laws that, in turn bring even more paperwork. To keep track of this plethora of data, software firms have responded with a wide range of Student Information System (SIS) programs, gradebook software and miscellaneous administrative packages. (william, 2017)

2. Student Information System is one of the key systems for facilitating the management and development of Higher Education Institutions. Its use for academic decision-making purposes as well as other academic tasks is crucial. Therefore, this paper aims to understand the impact of System Quality, Information Quality and Information Presentation on Student Information System satisfaction of academic and administrative staff. In this study, System satisfaction survey is carried out and factor analysis and regression tests are applied to interpret the collected data. The results show that only Information Quality has direct effect on satisfaction. Then the impact of decision-making as a mediator factor on system satisfaction is measured and the results reveal that System Quality and Information Quality has indirect significant effect whereas Information Presentation does not have direct nor indirect effect on system satisfaction. (Anon., n.d.)

3. Educational institutions should be able to use and utilize information technology as a supporter of operational activities in producing accurate

information. Victory University is one of higher education institutions that its operational works process is still manual, it is seen with the condition of data process of student academic value which is still processed offline. By this condition, the problem that arises is a complicated process because of the excessive use of time and paper, causing overhead to the students and the University. Therefore, the researcher conducts research with the title, "Academic Information System for Student (manihutu, 2018)

4. This paper presents a practitioner's view on student system implementations in the Australian university sector. A student information system is a core system of any university and integral to its operations and services to students. These systems are constantly on the list of major projects and at any point in time, a university is either implementing a new system or upgrading an existing one, or planning for either or both. These projects are costly, time-consuming and share common challenges that can be attributed to a combination of factors including software implementations, peculiarities of the individual institution, the sector, the software supplier and the environment in which it operates. Themes underpinning these challenges are explored and discussed with a view to creating greater understanding of the many facets that come into play. Questions are posed on future needs and directions given the challenges ahead, particularly the major sector reforms. (mukharjee, 2015)

5. The purpose of this study is to explore the role of visual aesthetics as a key in generating satisfaction in student information system (SIS) users and to discover relationships to other antecedents. This work has also studied how gender discriminates those relationships. DeLone and McLean’s model of information systems success, visual aesthetic and gender socialisation theory are used as a theoretical framework for the study. An explanatory model was proposed based on the previous literature, and then this model was validated using a sample of

undergraduate students. Partial Least Squares was chosen as the approach to conduct the statistical analysis. (McLean, n.d.)

17. Flowchart

A **flow chart** is a type of diagram that represents a workflow or process. A flowchart can also be defined as a diagrammatic representation of an algorithm, a step-by-step approach to solving a task.

The flowchart shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows. This diagrammatic representation illustrates a solution model to a given problem. Flowcharts are used in analyzing, designing, documenting or managing a process or program in various fields the flow chart mentioned below is of the student information system.

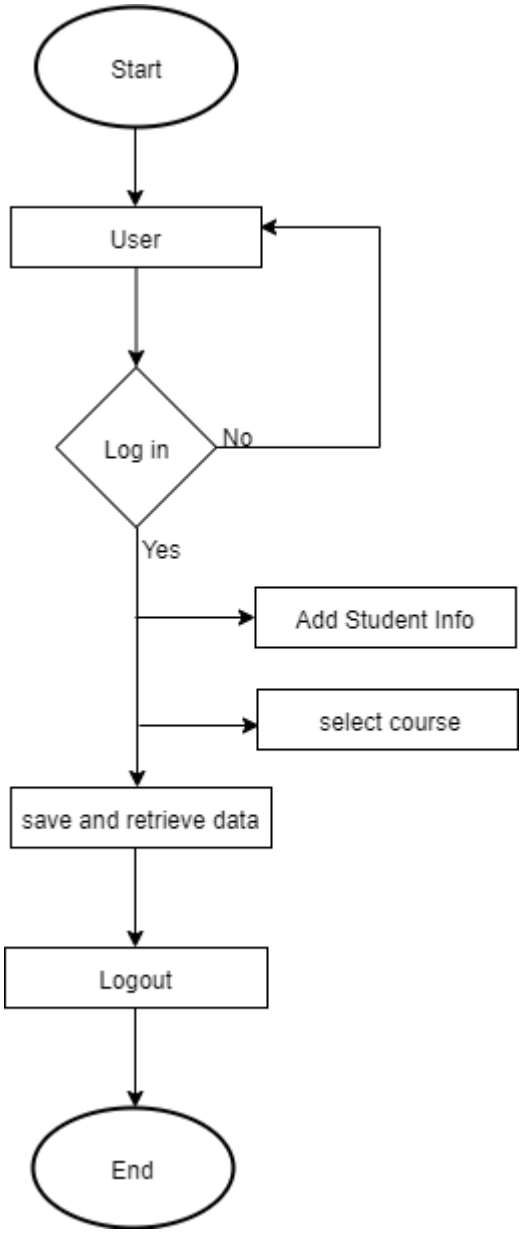


Figure 15: Flowchart of student information system

18. Algorithm used

Bubble Sort is a simple algorithm which is used to sort a given set of n elements provided in form of an array with n number of elements. Bubble Sort compares all the element one by one and sort them based on their values.

If the given array has to be sorted in ascending order, then bubble sort will start by comparing the first element of the array with the second element, if the first element is greater than the second element, it will **swap** both the elements, and then move on to compare the second and the third element, and so on.

If we have total n elements, then we need to repeat this process for n-1 times.

It is known as **bubble sort**, because with every complete iteration the largest element in the given array, bubbles up towards the last place or the highest index, just like a water bubble rises up to the water surface.

Sorting takes place by stepping through all the elements one-by-one and comparing it with the adjacent element and swapping them if required.

18. 1 Implementing Bubble Sort Algorithm

Following are the steps involved in bubble sort (for sorting a given array in ascending order):

1. Starting with the first element (index = 0), compare the current element with the next element of the array.
2. If the current element is greater than the next element of the array, swap them.
3. If the current element is less than the next element, move to the next element. **Repeat Step 1**.

Let's consider an array with values {**Bubble Sort** is a simple algorithm which is used to sort a given set of n elements provided in form of an array with n number of elements. Bubble Sort compares all the element one by one and sort them based on their values.

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Sorting takes place by stepping through all the elements one-by-one and comparing it with the adjacent element and swapping them if required.

Let's consider an array with values {5, 1, 6, 2, 4, 3 }

Below, we have a pictorial representation of how bubble sort will sort the given array.

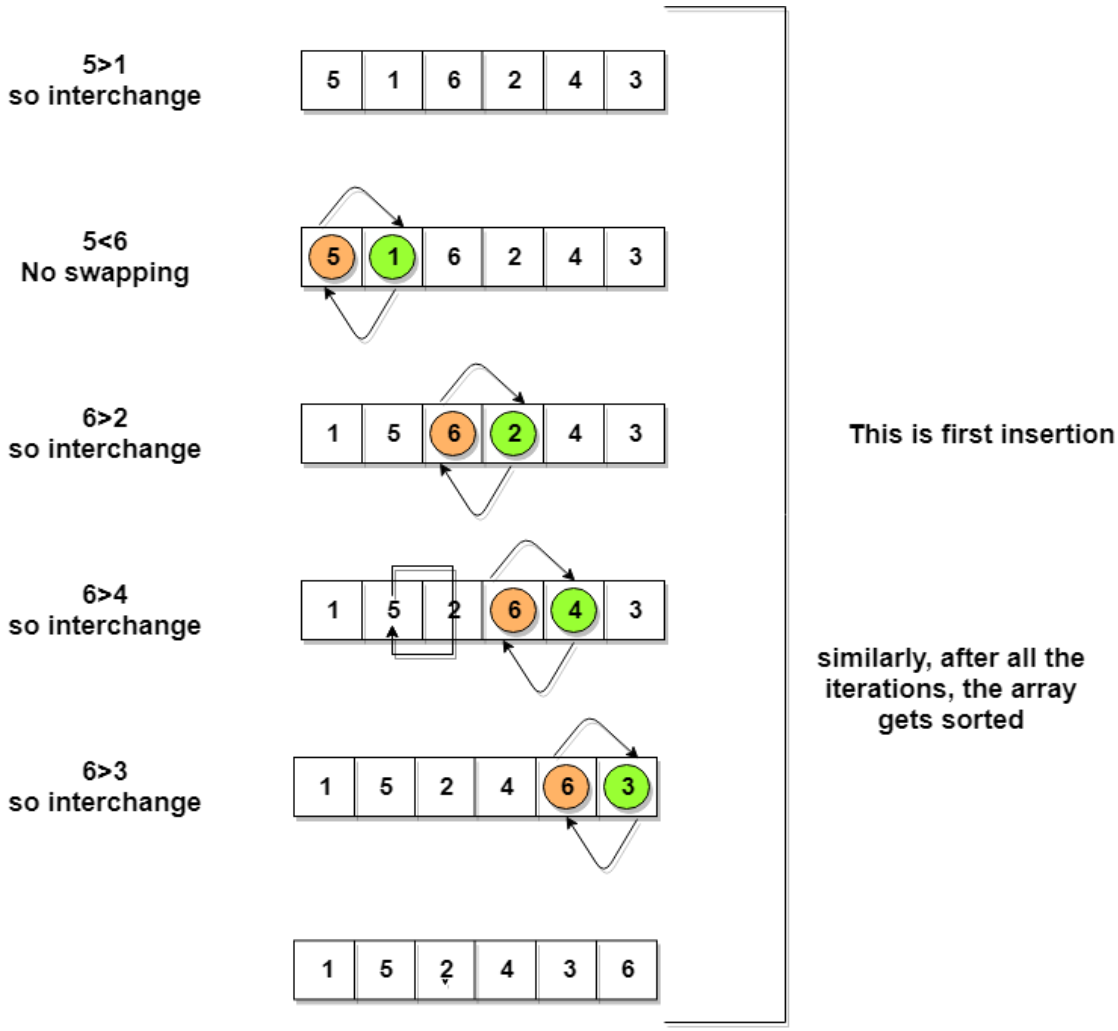

Figure 15: Bubble sort

So, as we can see in the representation above, after the first iteration 6 is placed at the last index, which is the correct position for it.

Similarly, after the second iteration,5 will be at the second last index, and so on (tonight, 2020).

19. Architecture diagram

An **architecture diagram** is a graphical representation of a set of concepts that are part of an **architecture**, including their principles, elements and components the below mentioned diagram is architecture diagram of student information system.

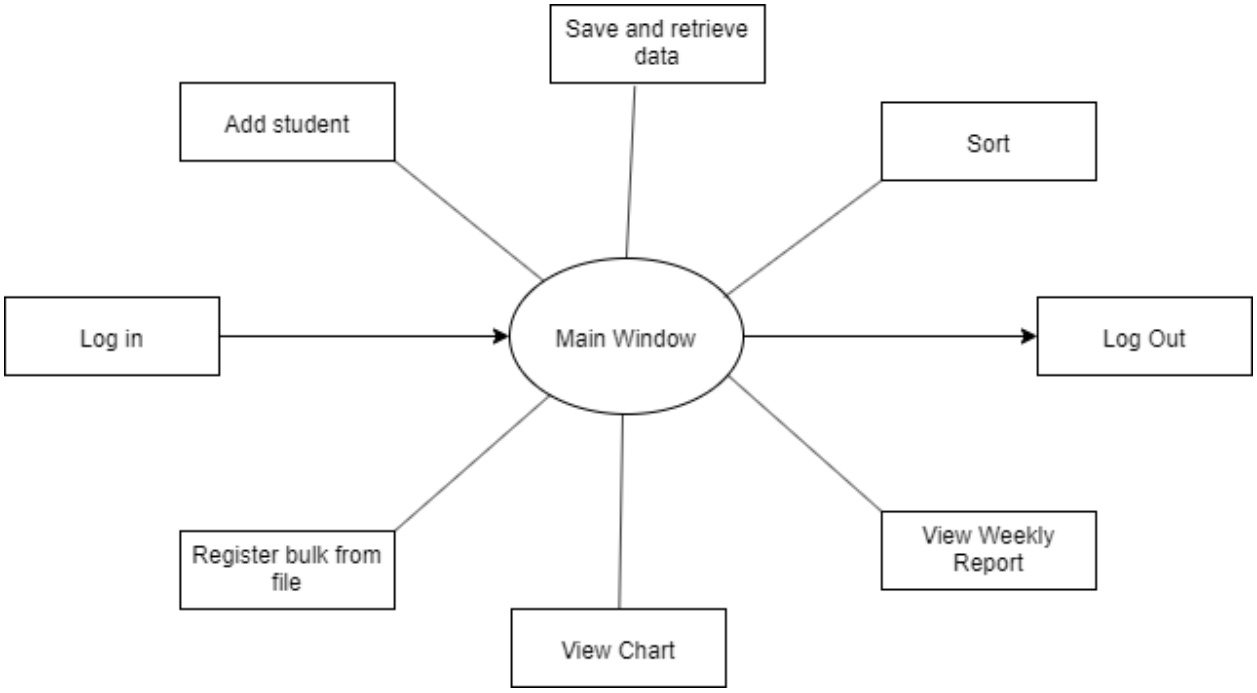

Figure 16 Architecture diagram of student information system

20. Classess

BaseWindow.xaml

-It helps to redirect to the next page after login.

MainWindow.xaml

-It helps to login.

RegisterStd.Xaml

-It helps to store xml files.

ViewRegisteredStd.xaml

-It is for showing the registered students details.

ViewChart.xaml

-It is for viewing the chart.

WeeklyReport.xaml

-It is for viewing weekly reports

21. Reflection

The developed system is Digitalized student information System. It is developed using Visual Studio 2019 with the C# language. The student management system is used in the system which reflects the real working environment of the student registration system. The GUI designed is highly user interface as well as clean design where user with basic system administration can operate the system.

An end user can have the facilities of login as well as logout facility for the end user. The registration date is automatically generated by the system. The details of the entered visitor can be added such as: Last Name, phone number, email address, gender, parent phone, parent name selection of program as well as level can be added manually by the user. In addition to that, a user can check out the weekly chart along with the report of the students.

I had some previous experience with Visual Studio. With this experience I had got some plus point while doing this coursework. I came to get more working and experience with the language. Features like creating chart generating list In addition to that, sorting of data form the grid was a new thing for me. Furthermore, import and exporting to CSV file along with the chart was the new concept for me which helped to get a lot of knowledge in the c# programming language.

22. Conclusion

After a lot of research and struggle in visual studio the coursework was completed on given time. The framework has login screen to add security to the task. After login, the framework shows an main page where there are four clickable button along with logout and exit button after clicking any one button among the four the clickable button the clicked button goes to its respective page where the data are further inserted and send into XML and the data is saved into XML and the data is further retrieve to show the report and chart of the students. Aside from various shape components, class outline for every one of the structures and classes were utilized for completing all these task visual studio was used with the version 2019 and the program was done in c sharp programming language.

References

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