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| Project On Payroll Management System using C Programming |
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| * Name: Md Anisujjaman * ID: 172-35-2203 * Submitted to: Md. Anwar Hossen * Department of Software Engineering * Date: 11 April 2018 * Spring 2018 |
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**Project in Brief**

**Project Title: Payroll System**

**Undertaken by:**

Md Anisujjaman

ID: 172-35-2203

Department of Software Engineering,

Daffodil International University.

**Supervised by:**

Md. Anwar Hossen

Lecturer

Department of Software Engineering,

Daffodil International University.

**Date Started: 15-01-2018**

**Date Completed: 10-04-2018**

**Project Language: C/C++**

**Default Password: 18465928**

**Tools Used:**

• Personal Computer

• Code:: blocks (v.17.12)

• Notepad

• Browser

**Operating System:** Windows 10

**Declaration**

The project titled “**Payroll Management System**”, submitted by Md Anisujjaman, ID: 172-35-2203 to the Department of Software Engineering, of Daffodil International University has been accepted by as satisfactory of the fulfillment of the requirements for the degree of B.Sc. in Software Engineering (SWE) and approved as to its style and contents.

It is hereby declared that this project – “**Payroll Management System**” Under the supervision of Md. Anwar Hossen, Lecturer, Department of Software Engineering, Daffodil International University. It is also declared that neither this project nor any part of this has been submitted elsewhere for award of any degree.

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**Introduction**

Built as a large, complex and effective program, Payroll management system project in C is a console application without the use of graphics. The project has multiple classes and sub-classes with numerous features within them. Basic operations users can perform via this program project that are based on file handling are adding new employee record, modifying employee record and deleting record, displaying one or all employee’s record. Besides these, payroll management also allows users to print the salary slip for a particular employee.

1.1 **Purpose of project**

A lot of organizations now a days are moving towards the Software to assist their workers and also to reduce their manpower. Almost every organization either small or large do have some employees and have to pay them on time. So to generate the payroll slips of their workers and manage them accordingly is a time consuming task which almost every organization wants to reduce as much as possible. So we are trying to develop such a reliable payroll engine which generates the payroll slips of employees efficiently and quickly. The Software Use by only the management of an Organization.

1.2 **Scope**

The scope of the project is the system on which the application is run, and it will work for a particular Companies. But later on the project can be modified to operate it online.

1.3 **Vision**

I wanted to Make A project to maintain a Company’s Employee Information, Attendance and Payroll.

1.4 **Proposed Solution**

I wanted to add more features. I wanted to print salary slip in this project but due to time issue and my understanding lacking I can’t complete this. But I will add these functions and will update my project.

**Requirement Specification**

2.1 **Functional Requirement**

* Login
* Insert
* Search
* Update List
* View List
* Delete Information
* Give Attendance
* View Attendance
* View Cost

2.2 **Non Functional Requirement**

* Safety
* Security
* Usability
* Maintainability
* Reliability

**System Analysis**

**3.1 Use Case Diagram**

System

Admin

3.2 **Use Case Description (Brief)**

Only Companies Admin Can Use This Software. Admin Can Add, Delete, View, Update & More. System Count Total Salary.

3.3 **Example (Login)**

|  |  |
| --- | --- |
| Use Case ID | 1 |
| Name | Log In |
| Primary Actor | Admin |
| Goal | Enter Software User Interface |
| Post Condition | Password Minimum 8 Character |
| Main Success Scenario | When Admin Enter the Software, He/She Should Log in by given password. If Password Wrong He/She Can,t Get Access This software. |
| Scenario Extensions | When Password is wrong He/She Can Try Again. But If He Tries 3 Time The Software Will Close Automatically. |

**Testing Methods**

There are different methods that can be used for software testing. This chapter briefly

describes the methods available.

**Black-Box Testing**

The technique of testing without having any knowledge of the interior workings of the

application is called black-box testing. The tester is oblivious to the system architecture

and does not have access to the source code. Typically, while performing a black-box

test, a tester will interact with the system's user interface by providing inputs and

examining outputs without knowing how and where the inputs are worked upon.

The following table lists the advantages and disadvantages of black-box testing.

|  |  |
| --- | --- |
| **Advantages** | **Disadvantages** |
| Well suited and efficient for large code  segments. | Limited coverage, since only a selected  number of test scenarios is actually  performed. |
| Code access is not required | Inefficient testing, due to the fact that  the tester only has limited knowledge  about an application. |
| Clearly separates user's perspective from  the developer's perspective through visibly defined roles. | Blind coverage, since the tester cannot  target specific code segments or error-prone areas. |
| Large numbers of moderately skilled  testers can test the application with no  knowledge of implementation, programming language, or operating  systems. | The test cases are difficult to design. |

**White-Box Testing**

White-box testing is the detailed investigation of internal logic and structure of the code. White-box testing is also called glass testing or open-box testing. In order to perform white-box testing on an application, a tester needs to know the internal workings of the code. The tester needs to have a look inside the source code and find out which unit/chunk of the code is behaving inappropriately.

The following table lists the advantages and disadvantages of white-box testing.

|  |  |
| --- | --- |
| **Advantages** | **Disadvantages** |
| As the tester has knowledge of the  source code, it becomes very easy  to find out which type of data can  help in testing the application  effectively. | Due to the fact that a skilled tester is  needed to perform white-box testing,  the costs are increased. |
| It helps in optimizing the code. | Sometimes it is impossible to look into  every nook and corner to find out  hidden errors that may create  problems, as many paths will go  untested. |
| Extra lines of code can be removed  which can bring in hidden defects |  |
| Due to the tester's knowledge  about the code, maximum coverage  is attained during test scenario  writing. | It is difficult to maintain white-box  testing, as it requires specialized tools  like code analyzers and debugging  tools. |

**Grey-Box Testing**

Grey-box testing is a technique to test the application with having a limited knowledge of the internal workings of an application. In software testing, the phrase the more you know, the better carries a lot of weight while testing an application. Mastering the domain of a system always gives the tester an edge over someone with limited domain knowledge. Unlike black-box testing, where the tester only tests the application's user interface; in grey-box testing, the tester has access to design documents and the database. Having this knowledge, a tester can prepare better test data and test scenarios while making a test plan.

|  |  |
| --- | --- |
| **Advantages** | **Disadvantages** |
| Offers combined benefits of black-box  and white-box testing wherever  possible. | Since the access to source code is not  available, the ability to go over the  code and test coverage is limited. |
| Grey box testers don't rely on the  source code; instead they rely on  interface definition and functional  specifications. | The tests can be redundant if the  software designer has already run a  test case. |
| Based on the limited information  available, a grey-box tester can  design excellent test scenarios  especially around communication | Testing every possible input stream is  unrealistic because it would take an  unreasonable amount of time;  therefore, many program paths will go untested. |

**Implementation**

Implementation (software) perspective describes software implementations in a particular technology.

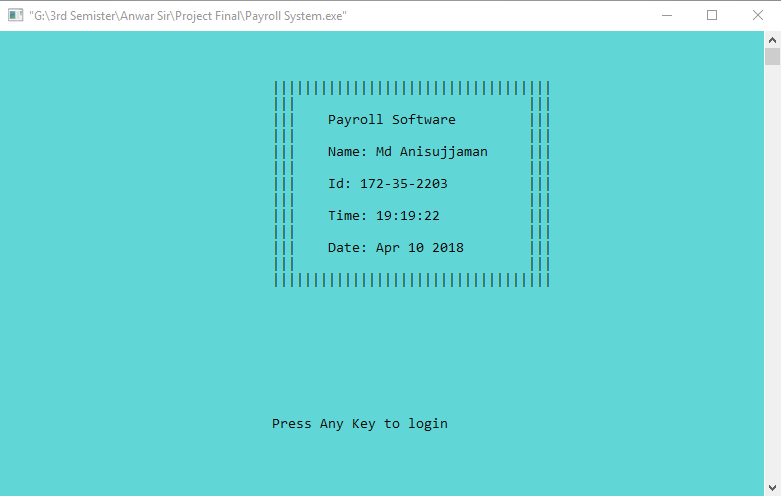
In the implementation phase, the developer builds the components either from scratch or by composition given the architecture document from the design phase and the requirement document from the analysis phase. The architecture document should give guidance. Sometimes, this guidance is found in the requirement document. The implementation phase deals with issues of quality, performance and debugging. The end deliverable of implementation phase is the product itself.

4.1 **Tools & Technologies**

Following are the tools and technologies used in development of this project:

* Personal Computer
* Code::blocks (v.17.12)
* Notepad
* Browser

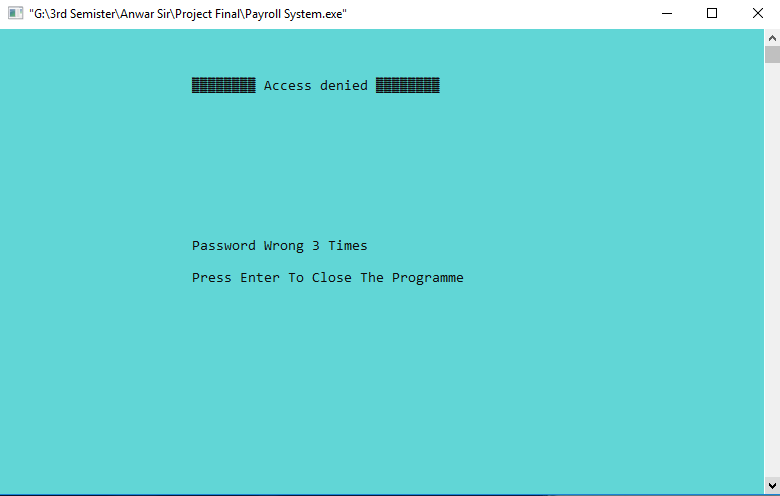
**User Manual with Screenshot**

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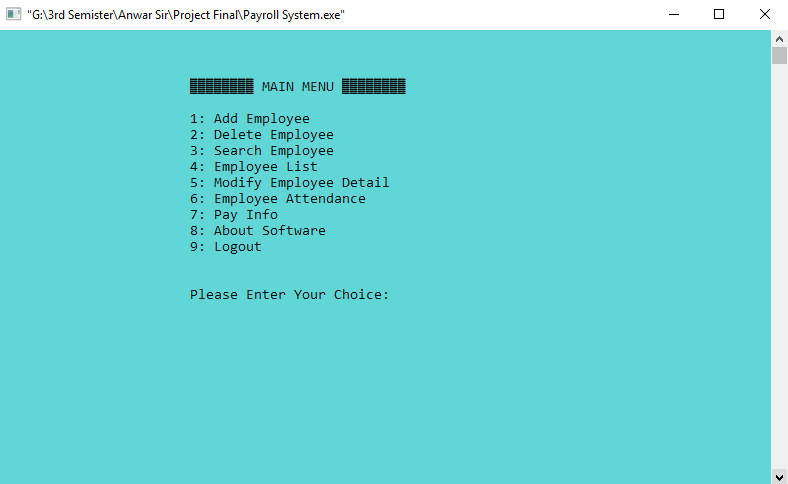
Press Any Key to Log in

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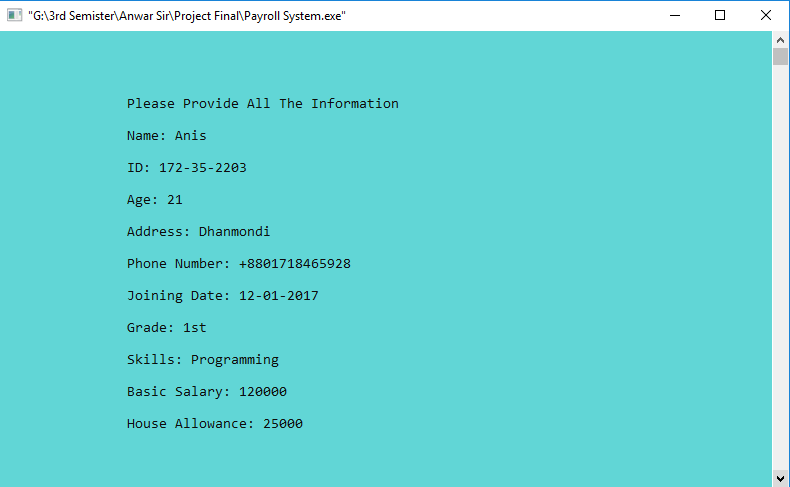
Enter 1 To Try Again and 0 To Exit



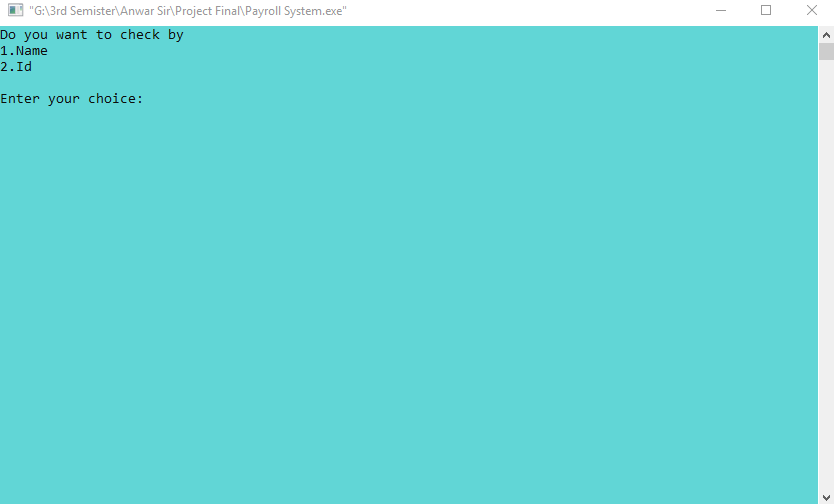
If Password Wrong Three Time, Then Show “Access Denied”. Programme Will Close.

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After Successfully Log It Will Open Main menu. Please Enter Your Choice



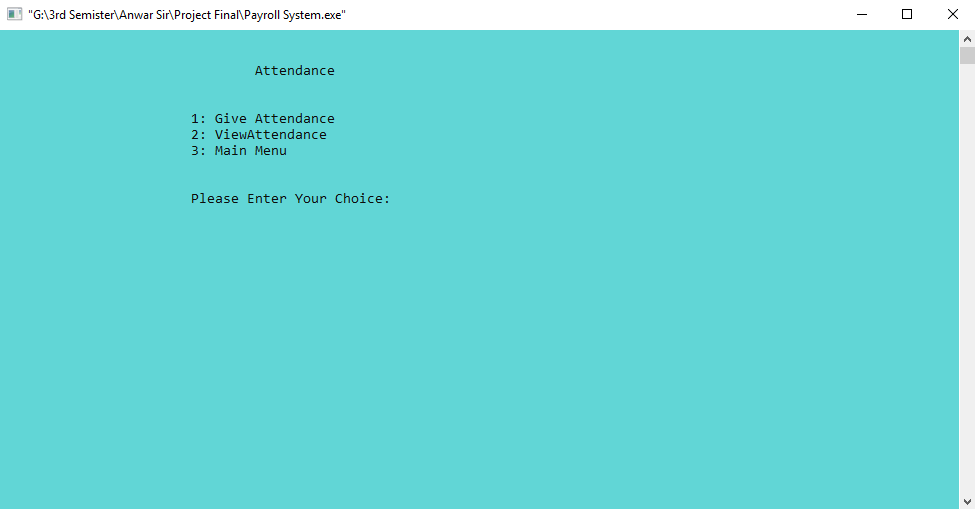
After Choose Add Employee, Please Provide All the Information.



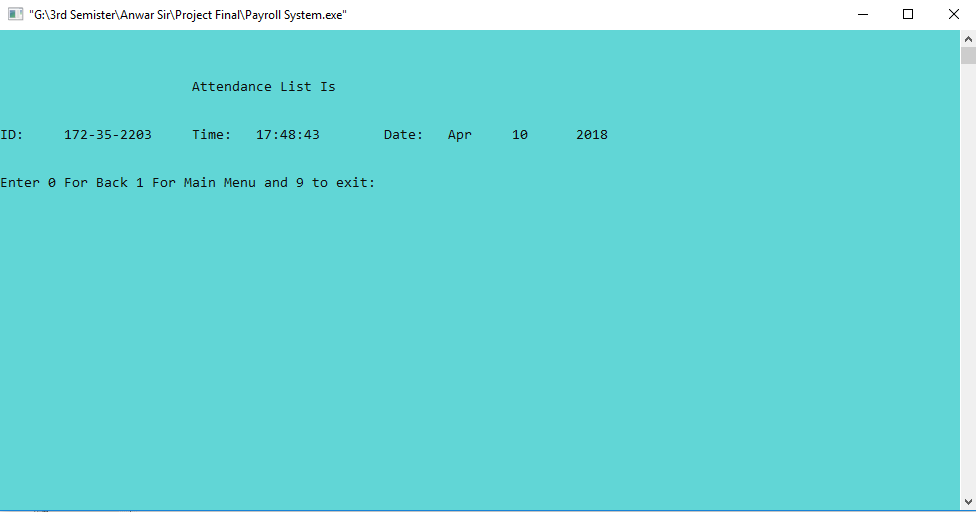
You Can Search by Name or ID.



Search Detail

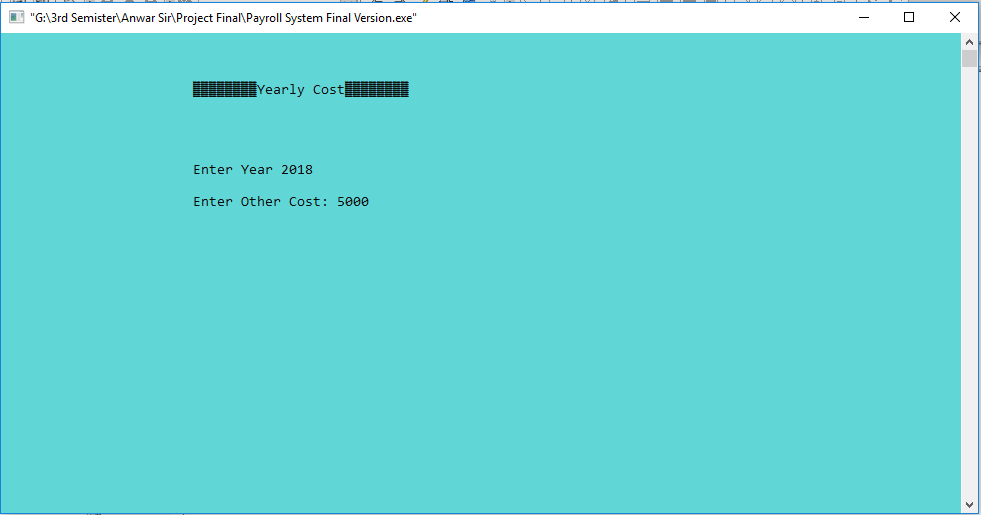


Attendance Menu

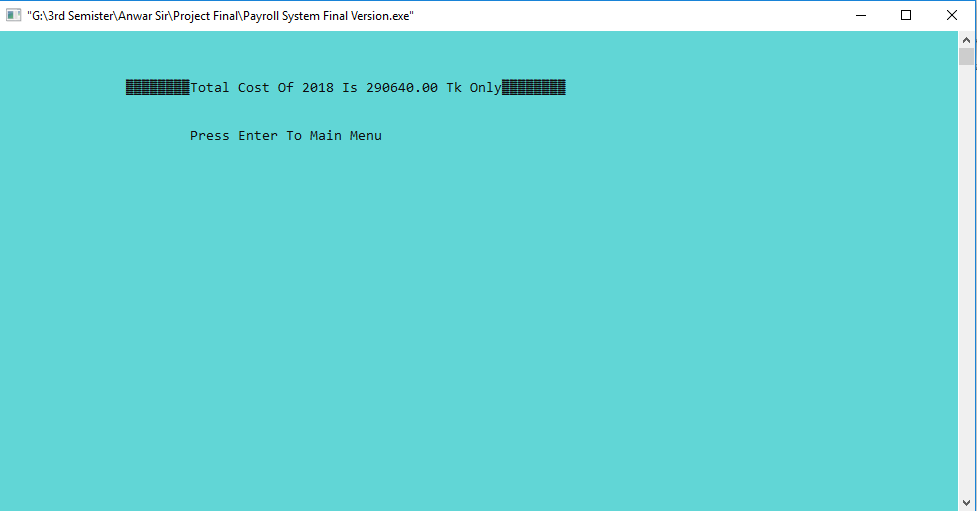


View Attendance List

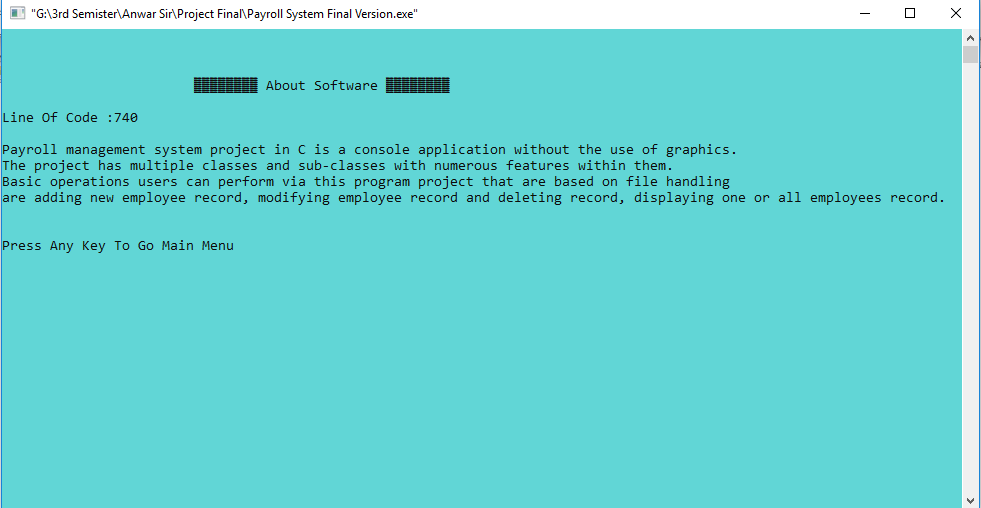
Enter Year to See Cost

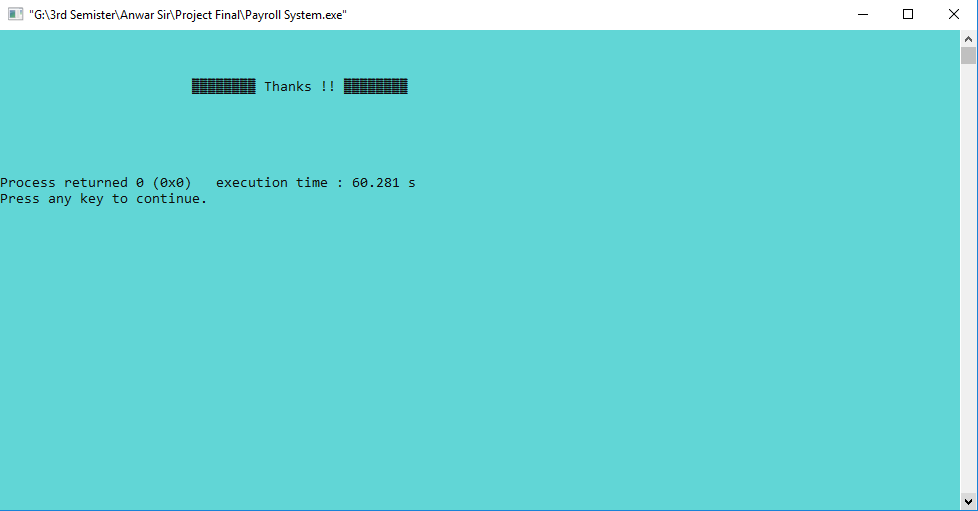


Detail Of Total Cost



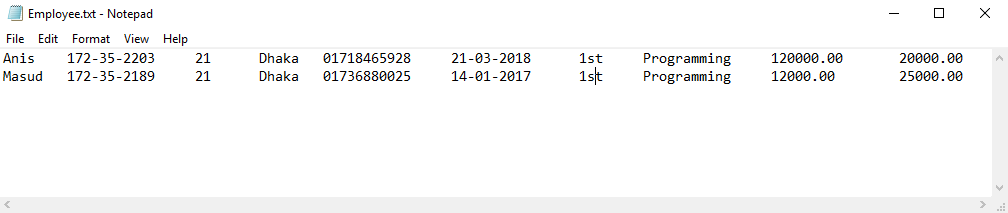
About Software



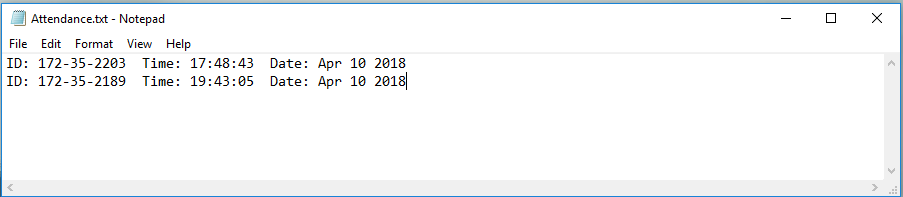
After Exit

**Data in File**

Data in Employee Information:



Data in Employee Attendance:



**Conclusion**

5.1 **Pros of the System**

The good features of this system is take employees information and save in a text file and also take attendance and save in a text file. When search Employees information or attendance the system show the information and attendance.

5.2 **Cons of the System**

There are some Lag in this project. There I can’t Add Some Feature Due to Cons.

5.3 **Future Enhancements**

In future I want to remove all bugs from my system. I want to fulfill my all visions properly. I also interested to complete this system with JAVA, PHP or PYTHON.

**Reference**

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* YouTube.com
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