

**American International University- Bangladesh**

**CSC 1205: Object Oriented Programming 1 (JAVA)**

**CO4 Evaluation**

**Project Concluding Report**

**Spring 19-20**

**Group ID: X**

**Project Title: Calculator**

|  |  |
| --- | --- |
| Student Name | Student Id |
|  |  |
| Shamim, Md. Mozammel Hossan | **18-38616-2** |

**Introduction:**

*Why you are doing this project? (No more than 60 words)*

If we don’t know why we are doing a project, then maybe we shouldn’t be doing it. But on many projects, if you ask the team “what will be different when we finish?” they look confused and start talking about the tasks they are performing.

In a recent post, I decided to categorize projects according to two dimensions (tactical versus strategic and Operational Excellence versus Innovation). This gave me four kinds of projects to look at:

Calculator projects are Small projects that are designed to help the calculation better. The project might need to be done to stay in the industry, meet compliance requirements, or maintain competitiveness. An example might include replacing a legacy computer system or re-engineering existing processes.

Opportunity projects are aimed at a short term gain that is visible to the outside world (increased revenue, better brand recognition) but does not aim to re-engineer the organization or the product line.

**Problem Analysis:**

*What kind of problem is being solved with this project? Who will use this application?*

*(No more than 60 words)*

A machine is anything that reduces human effort.

We use calculators so that we can find out answers to mathematical problems without using too much of our energy and time and also reducing our effort.

Since the calculator is invented life of each one becomes easy because of

It reduces human error.

Complex mathematical calculation in fraction of seconds.

zero error

Avoiding repetitive work

**UI Design Analysis:**

*How will the users interact with this application? How can it be improved?*

*(No more than 60 words)*

There are small changes you can make to your app that can have a big impact on usability, and ultimately, improve engagement and satisfaction. Try these five tips to improve your app user experience and optimize performance.

1. Revamp Your Sign-up Screen

2. De-scarify Your In-app Permissions

3. Spice Up Your Microinteractions

4. Add Controls and Transparency to Sharing Options

5. Gather Qualitative Data

In a Nutshell

Always be thinking about how the user will interact with different functions in your app, and design with them in mind. Optimization is an ongoing process and over time, you’ll see the value of your improvements.

**Logical Analysis:**

*How much logic has been applied in this application? Are the applied logics working properly? Is there any logical limitations?*

*(No more than 100 words)*

So many logic has been applied in this application. They working Properly.

**The Toggle button**

The Calculator uses the "toggle" button to toggle the number in the display between positive and negative.

**The Clear button**

Next we want to implement the "clear" button. Again we will add code to the button that will call a command on the Card Script.

**The Equals button**

The final, and most import stage of implementing the Calculator is to implement the "equals" button.

When the "equals" button is pressed the calculation the user has entered is processed and the final result is displayed. To get this working there are a number of features we need to add to the calculator

**The Percentage button**

The first operation we will implement is the percentage operation.

Select the "percentage" button, and open its Script Editor by pressing the Code button in the Menubar. Add the following code to the button and apply it, again the button will call a custom command that we will implement on the Card Script.

**OOP Concept Analysis:**

*What are the OOP1 principles used in this project? How have been they applied? Explain the OOP concepts used in this application (No more than 3 sentences per concept)?*

*(No more than 160 words)*

The three principles of object-oriented programming are used in this application. They are encapsulation, inheritance, and polymorphism

**Encapsulation**

It has a few logically different objects which communicate with each other — according to the rules defined in the program.

Encapsulation is achieved when each object keeps its state private, inside a class. Other objects don’t have direct access to this state. Instead, they can only call a list of public functions — called methods.

**Inheritance**

Objects are often very similar. They share common logic. But they’re not entirely the same.

So how do we reuse the common logic and extract the unique logic into a separate class? One way to achieve this is inheritance.

It means that you create a (child) class by deriving from another (parent) class. This way, we form a hierarchy.

The child class reuses all fields and methods of the parent class (common part) and can implement its own (unique part).

**Polymorphism**

we have a parent class and a few child classes which inherit from it. Sometimes we want to use a collection . for example a list — which contains a mix of all these classes. Or we have a method implemented for the parent class — but we’d like to use it for the children, too.

This can be solved by using polymorphism.

**Impact of this Project:**

*What impact this project will have on the society and economy? How will people be benefitted from your project?*

(Maximum 80 words)

This calculator has been provided to allow event organisers and funders to get a broad feel for the scale of economic impact that an event might achieve.

It works on the principles outlined in the economic resource pages of event impacts, and each step corresponds to guidance within those pages. It is strongly recommended that users download and read this guide first and that they collect all the necessary data inputs before starting to use the calculator. Robust use of the calculator will require the entry of data collected from survey work at an event. There are also a number of case studies that can help with using the calculator – they can be downloaded here.

It is worth stressing that the quality of outputs will only be as good as the quality of the inputs. In other words, if event organizers or funders underestimate or exaggerate inputs, the results will represent either an underestimation or exaggeration of the overall economic impact.

***[Note: Make sure that your report is maximum 3 pages (including cover page).]***