DHAKA INTERNATIONAL UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROJECT ON

Calculator using Object Oriented in C++

COURSE CODE CSE-208

SEMESTER 6th

SUBMITTED TO

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LECTURER

DEPARTMENT OF CSE

SUBMITTED BY

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BATCH D-79

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Objective:

- To learn programming language mainly in C++.
- To learn object orianted programimng language in C++.
- To learn how to write code in C++ compilier.
- To see how C++ work in every device.
- To learn how to solve problem in C++.

Introduction:

C++ is high level programming language used in many platform. Like as mobile, computer, mac ect. OOP in C++ means writing procedures or methods that perform operation on the data. In C++ there is no free function. Every belong to some class. There are arranged in a hierarely or package structure. While compilier at first it makes the program in machine code. This code can be interpeted in any device.

Code:

```
#include<iostream>

using namespace std;

float chooseOp()

{

   cout<<"Choose the Operator: "<<endl;

   cout<<" 1- Add\n 2- Substract\n 3- Multiply\n 4- Divide"<<endl;

   float op;

   cin>>op;

   return op;

}

float getValue()
```

```
{
   cout<<"Enter First Number: "<<endl;
   float n1;
   cin>>n1;
   return n1;
 }
float getValue2()
{
   cout<<"Enter Second Number: "<<endl;
   float n2;
   cin>>n2;
   return n2;
 }
float calculateResult(float op, float n1, float n2)
{
   if(op==1)
   return n1+n2;
   if(op==2)
   return n1-n2;
    if(op==3)
   return n1*n2;
    if(op==4)
   return n1/n2;
}
   void printResult (float result)
{
```

```
    cout<<"Result: "<<result<<endl;
}
int main()
{
   float op = chooseOp();
   float value1 = getValue();
   float value2 = getValue2();
   float result = calculateResult(op,value1,value2);
   printResult(result):
 return 0;
}
```

Procedure:

Work flow overview:

- Open the chosen IDE.
- Create a new C++ project.
- Create a C++ function.
- Implement the code.
- Compile and execute the program.

Code flow analysis:

- The programe start with the header of C++ .
- We create the operator function where we can set which operator will be worked.
- Then we create the function of first number and second number.
- There all variable type is float.
- Then we create the calculating function where we use switch case which can calculate adding, substract, multiplication, division.
- Now we create the result function.
- Finally create the main function to all codes execute.

Output:

main.cpp

Share Run

```cpp
#include<iostream>
using namespace std;

float chooseOp(){
    cout<<"Choose the Operator: "<<endl;
    cout<<" 1- Add\n 2- Substract\n 3- Multiply\n 4- Divide"<<endl;
    float op;
    cin>>op;
    return op;
}
float getValue(){
    cout<<"Enter First Number: "<<endl;
    float n1;
    cin>>n1;
    return n1;
}
float getValue2(){
    cout<<"Enter Second Number: "<<endl;
```

Output

```
/tmp/fIdQCuhuru.cpp: In function 'floa
/tmp/fIdQCuhuru.cpp:35:1: warning: con
    -type]
   35 | }
      | ^
/tmp/fIdQCuhuru.o
Choose the Operator:
 1- Add
 2- Substract
 3- Multiply
 4- Divide
```

main.cpp

Share Run

```cpp
#include<iostream>
using namespace std;

float chooseOp(){
    cout<<"Choose the Operator: "<<endl;
    cout<<" 1- Add\n 2- Substract\n 3- Multiply\n 4- Divide"<<endl;
    float op;
    cin>>op;
    return op;
}
float getValue(){
    cout<<"Enter First Number: "<<endl;
    float n1;
    cin>>n1;
    return n1;
}
float getValue2(){
    cout<<"Enter Second Number: "<<endl;
    float n2;
    cin>>n2;
    return n2;
```

Output

```
/tmp/fIdQCuhuru.cpp: In function 'float ca
/tmp/fIdQCuhuru.cpp:35:1: warning: control
    -type]
   35 | }
      | ^
/tmp/fIdQCuhuru.o
Choose the Operator:
 1- Add
 2- Substract
 3- Multiply
 4- Divide
1
Enter First Number:
```

main.cpp

Share Run

Output

```cpp
#include<iostream>
using namespace std;

float chooseOp(){
    cout<<"Choose the Operator: "<<endl;
    cout<<" 1- Add\n 2- Substract\n 3- Multiply\n 4- Divide"<<endl;
    float op;
    cin>>op;
    return op;
}
float getValue(){
    cout<<"Enter First Number: "<<endl;
    float n1;
    cin>>n1;
    return n1;
}
float getValue2(){
    cout<<"Enter Second Number: "<<endl;
    float n2;
```

```
/tmp/fIdQCuhuru.cpp: In function 'float calculateResult(floa
/tmp/fIdQCuhuru.cpp:35:1: warning: control reaches end of no
    -type]
   35 | }
      | ^
/tmp/fIdQCuhuru.o
Choose the Operator:
 1- Add
 2- Substract
 3- Multiply
 4- Divide
1
Enter First Number:
35
Enter Second Number:
```

main.cpp

Share Run

Output

```cpp
#include<iostream>
using namespace std;

float chooseOp(){
    cout<<"Choose the Operator: "<<endl;
    cout<<" 1- Add\n 2- Substract\n 3- Multiply\n 4- Divide"<<endl;
    float op;
    cin>>op;
    return op;
}
float getValue(){
    cout<<"Enter First Number: "<<endl;
    float n1;
    cin>>n1;
    return n1;
}
float getValue2(){
    cout<<"Enter Second Number: "<<endl;
    float n2;
    cin>>n2;
    return n2;
```

```
/tmp/fIdQCuhuru.cpp: In function 'float calculateResult(float, flo
/tmp/fIdQCuhuru.cpp:35:1: warning: control reaches end of non-void
    -type]
   35 | }
      | ^
/tmp/fIdQCuhuru.o
Choose the Operator:
 1- Add
 2- Substract
 3- Multiply
 4- Divide
1
Enter First Number:
35
Enter Second Number:
79
Result: 114


=== Code Execution Successful ===
```

main.cpp

Share Run

Output

```cpp
#include<iostream>
using namespace std;

float chooseOp(){
    cout<<"Choose the Operator: "<<endl;
    cout<<" 1- Add\n 2- Substract\n 3- Multiply\n 4- Divide"<<endl;
    float op;
    cin>>op;
    return op;
}
float getValue(){
    cout<<"Enter First Number: "<<endl;
    float n1;
    cin>>n1;
    return n1;
}
float getValue2(){
    cout<<"Enter Second Number: "<<endl;
    float n2;
    cin>>n2;
    return n2;
```

```
/tmp/CtfA4632p2.cpp: In function 'f
/tmp/CtfA4632p2.cpp:35:1: warning:
    -type]
   35 | }
      | ^
/tmp/CtfA4632p2.o
Choose the Operator:
 1- Add
 2- Substract
 3- Multiply
 4- Divide
2
Enter First Number:
489
Enter Second Number:
9474
Result: -8985


=== Code Execution Successful ===
```

main.cpp

Share Run

Output

```
#include<iostream>
using namespace std;

float chooseOp(){
    cout<<"Choose the Operator: "<<endl;
    cout<<" 1- Add\n 2- Substract\n 3- Multiply\n 4- Divide"<<endl;
    float op;
    cin>>op;
    return op;
}
float getValue(){
    cout<<"Enter First Number: "<<endl;
    float n1;
    cin>>n1;
    return n1;
}
float getValue2(){
    cout<<"Enter Second Number: "<<endl;
    float n2;
    cin>>n2;
    return n2;
```

```
/tmp/in6oajwo69.cpp: In function 'float calcu
/tmp/in6oajwo69.cpp:35:1: warning: control re
    -type]
   35 | }
      | ^
/tmp/in6oajwo69.o
Choose the Operator:
 1- Add
 2- Substract
 3- Multiply
 4- Divide
3
Enter First Number:
670
Enter Second Number:
34
Result: 22780


=== Code Execution Successful ===
```

main.cpp

Share Run

Output

```
#include<iostream>
using namespace std;

float chooseOp(){
    cout<<"Choose the Operator: "<<endl;
    cout<<" 1- Add\n 2- Substract\n 3- Multiply\n 4- Divide"<<endl;
    float op;
    cin>>op;
    return op;
}
float getValue(){
    cout<<"Enter First Number: "<<endl;
    float n1;
    cin>>n1;
    return n1;
}
float getValue2(){
    cout<<"Enter Second Number: "<<endl;
    float n2;
    cin>>n2;
    return n2;
```

```
/tmp/72lyHBecrw.cpp: In function 'f
/tmp/72lyHBecrw.cpp:35:1: warning:
    -type]
   35 | }
      | ^
/tmp/72lyHBecrw.o
Choose the Operator:
 1- Add
 2- Substract
 3- Multiply
 4- Divide
4
Enter First Number:
8945
Enter Second Number:
320
Result: 27.9531


=== Code Execution Successful ===
```

Discussion:

In the project our main goal is to learn OOP in C++. Then we implemented code in compilier. We also learn benefits of object oriented . So at first we seen how to use IDE. We also seen how C++ compilier process work. Then we seen various function in C++. Finally we executed code of “Calculator”.