Heaven's Light is Our Guide
Rajshahi University of Engineering & Technology
Department of Computer Science & Engineering

Lab Manual

Course Code: **CSE 1204 (Sec A)**
Course Title: Sessional based on CSE 1203
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Module 4 [Polymorphism-1]
(for Week 5:21-25/06/2025)

Topic 1[**Method/Function Overloading**]
Problem Statement: Define a class Test where overload a method Sum() to sum numbers sent from main() function.

```
class Test{

  public:
  //overload Sum() method according to the requirement of main()
};
int main(){
  Test t;
  t.Sum(10); //returns 10
  t.Sum(10,20) //return 30
  t.Sum(5.7,20) //return 25.7
  t.Sum(10,2.6) //return 12.6
  t.Sum(10.5,20.7) //return 21.2
}
```

Topic 2 [**Operator Overloading**]: Suppose in a AC circuit, there are 3 impedances z1=3+j4, z2=4-j3 and z3=j6 are connected in parallel. Now find the current in the circuit if input voltage is 100+j50. Implement **operator overloading** concept for your calculation. Use class **Circuit** and initialize the impedance values (real & img) by a constructor.

```
class Circuit{
 private:
    int real;
    int img;
  public:
    //write constructor
   //write operator overloaded method
  //write a display method to display real and img
};

int main(){
 Circuit z1(3,4);
 //write required statements to find the current
}
```

Topic 3[Unary Operator Overloading]

Problem statement: Write a program using unary operator overloading to control the sound of a TV remote. If '+' button is pressed then sound increases and if '-' button pressed then sound decreases.

```
class Remote{
  int sound;
 //write your codes
}
```

```
int main(){
 Remote rs;
 ++rs; //sound++ when '+' button is pressed
 ++rs;
 --rs  //sound–  when '-' button is pressed
 rs.Display();  //display the value of sound
 return 0;
}
```

Topic 4 [Friend Function]

Problem Statement: Suppose your money is deposited in two banks through their private data members **money1** and **money2** respectively. Now based on the statements in **main()** function, write a program to calculate your total money using a friend function **Sum().**

```
class Bank1{
 private:
    float money1;
  public:
     //write your codes
};

class Bank2{
 private:
    float money2;
  public:
     //write your codes
};

//write the body of friend functions

int main(){
 Bank1 b1(2000);
 Bank2 b2(4000);
 Sum(b1,b2);
}
```