

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

Lab Manual

Course Code: **CSE 1204 (Sec B)**
Course Title: Sessional based on CSE 1203
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Module 8 [Advanced Topics: Java Programming]
(Week 9:26-30/7/2025)

Topic 1: [ArrayList class]: Create an object of ArrayList class and implement the following methods:

- i) add()
- ii) get()
- iii) set()
- iv) remove()
- v) size()
- vi) toString()
- vii) sort()
- viii) clear()

Topic 2:[Anonymous Object]: Write a method **MidPoint()** that accepts two **Point** objects and return their mid-point anonymously .

Topic 3: [inner class]: Suppose **B** is the inner class of **A** and **ax** and **bx** are the private data members of **A** and **B** respectively. Now write a method to sum **ax** and **bx** using the object of class B.

Topic 4[inheritance: use of super keyword]

Problem Statement: For the following Java program write

- i) to display x of class A in class B
- ii) statement to call getX() of class A in class B
- iii) to call parameterized constructor of in class B

```
class A{
    int x;
    public A(){
        x=0;
    }
    public A(int x){
        this.x=x;
    }

    public int getX(){
        return(x+10);
    }
class B extends A{
    int x=20;
    public int getX(){
        return(x+10);
    }
}
public class First{
    public static void main(String[] args) {
    }
```

}	
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Topic 5[interface in Java]

Problem Statement: Write three interfaces in Java namely AI, BI and CI with the following activities:

- i) Declare method PrintA() in AI
- ii) Declare method PrintB() in BI
- iii) Declare method PrintC() in CI
- iv) write body of PrintA() in class A
- v) write body of PrintB() in class B which is inherited from class A
- vi) write body of PrintC() in class C which is inherited from class B
- vii) Create object of class C in main() of First class and invoke PrintA(), PrintB() and PrintC()