EUROPEAN UNIVERSITY OF BANGLADESH

Dept. of CSE (Reg)

Assignment No: 01
Assignment Name: Abstraction, Keywords(Static, Super) exercises
Course Name: Object Oriented Programming Sessional
Course code: CSE-212

Submitted to:

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Designation : Lecturer

Submitted by:

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Batch : 31th

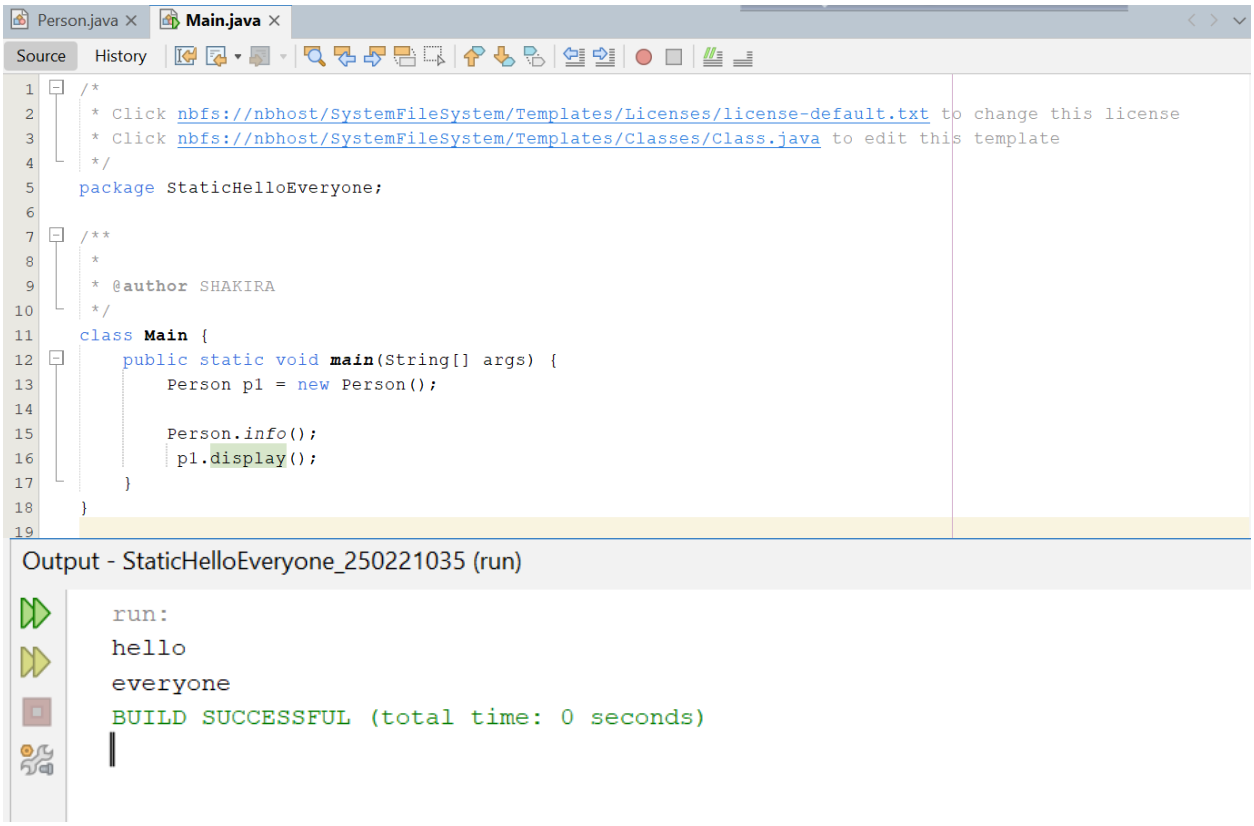
Semester : 2nd

Date of submission : 19. 11. 2025

Marks: **Sign:**

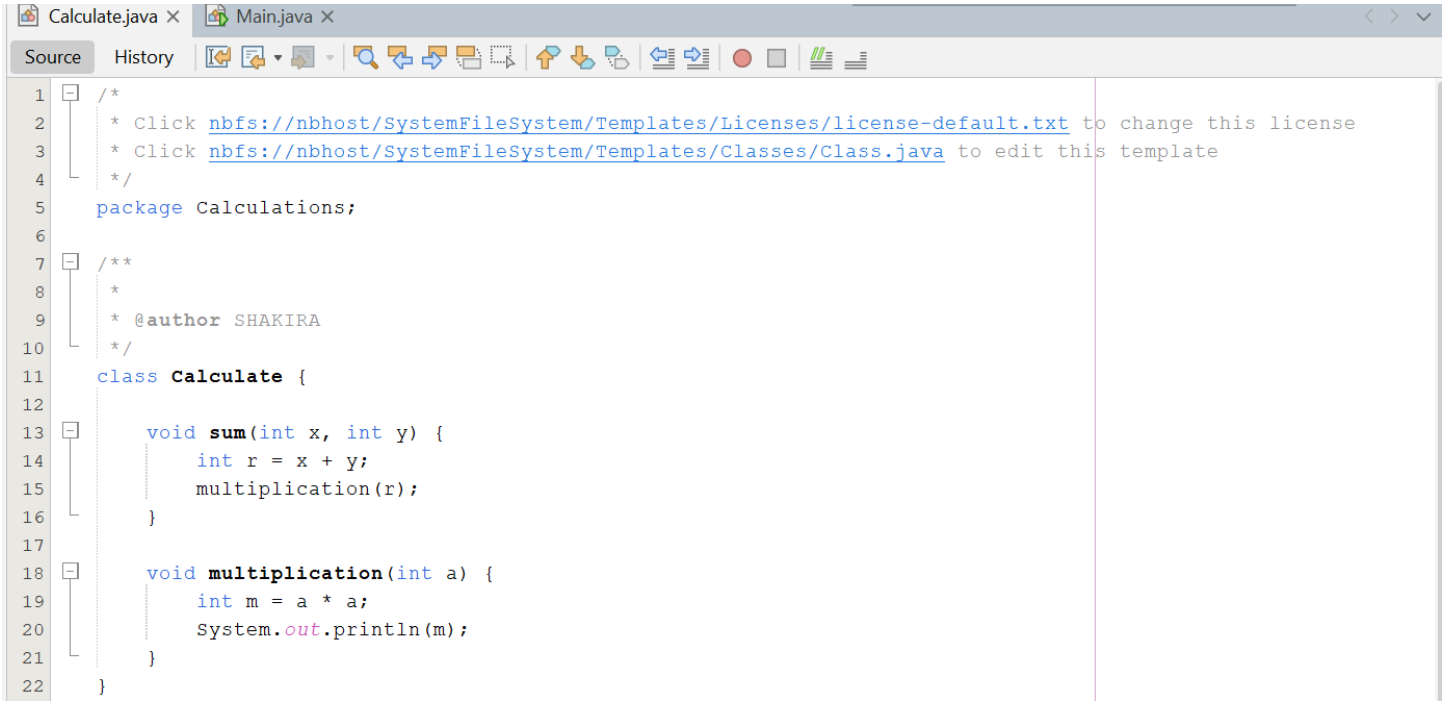
1. STATIC HELLO EVERYONE Program

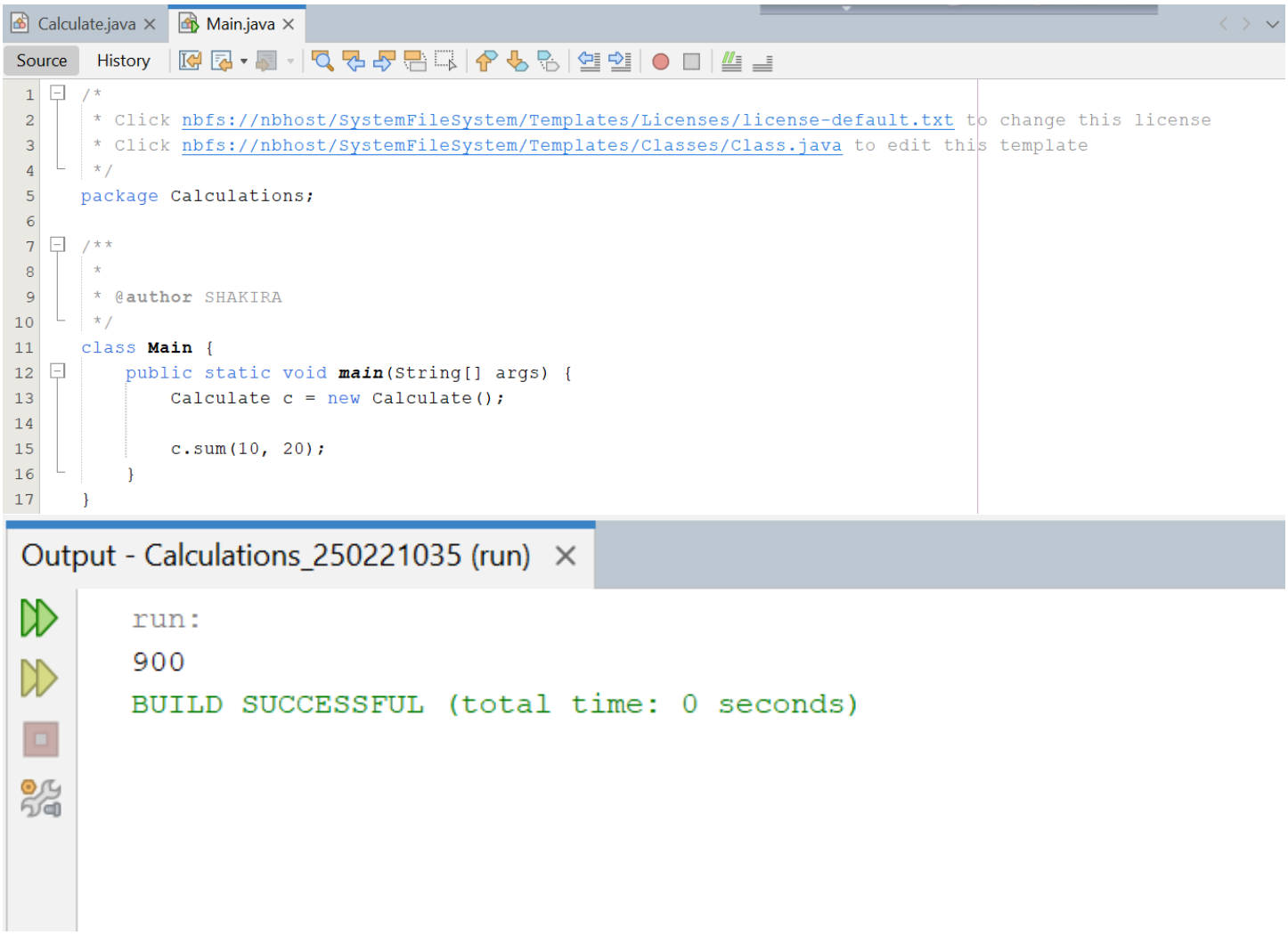
```
class Person {

    static void info() {
        System.out.println("hello");    }

    void info2() {
        System.out.println("everyone");    }
}

class Main {
    public static void main(String[] args) {
        Person p1 = new Person();

        Person.info();
         p1.info2();
    }
}
```



2. Calculations Program

```
class Calculate {

    void sum(int x, int y) {
        int r = x + y;
        multiplication(r);
    }

    void multiplication(int a) {
        int m = a * a;
        System.out.println(m);
    }
}

class Main {
    public static void main(String[] args) {
        Calculate c = new Calculate();

        c.sum(10, 20);
    }
}
```





3. STATIC BLOCK Program

```
class StaticBlock {
    static int x;
    static double b;

    static{
        x=10;
        b=20.2;}

  static void display(){
      System.out.println(x+b);
      System.out.println(x+", "+b);
  }
}
class Main {
    public static void main(String[]args) {

    StaticBlock.display();
    System.out.println(StaticBlock.x);
    System.out.println(StaticBlock.b);
    }
}
```

StaticBlock.java × Main.java ×

Source History

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
 */
package StaticBlock;

/**
 *
 * @author SHAKIRA
 */
class StaticBlock {
    static int x;
    static double b;

    static{
        x=10;
        b=20.2;}

  static void display(){
      System.out.println(x+b);
      System.out.println(x+", "+b);
  }
}
```

StaticBlock.java × Main.java ×

Source History

```java
/*
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 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
 */
package StaticBlock;

/**
 *
 * @author SHAKIRA
 */
class Main {
    public static void main(String[]args) {

    StaticBlock.display();
    System.out.println(StaticBlock.x);
    System.out.println(StaticBlock.b);
    }
}
```
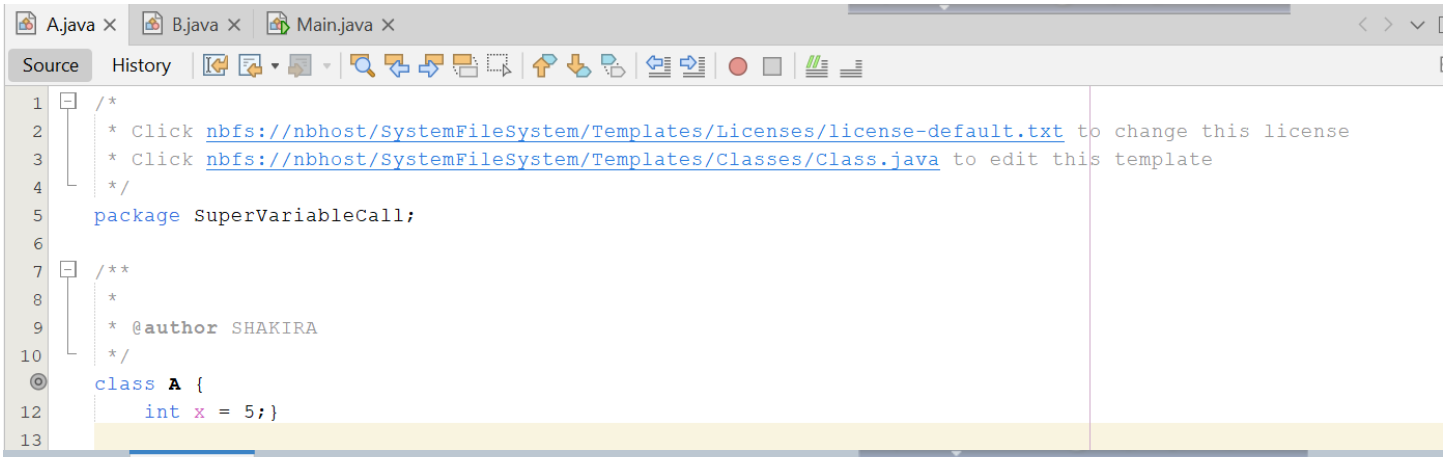
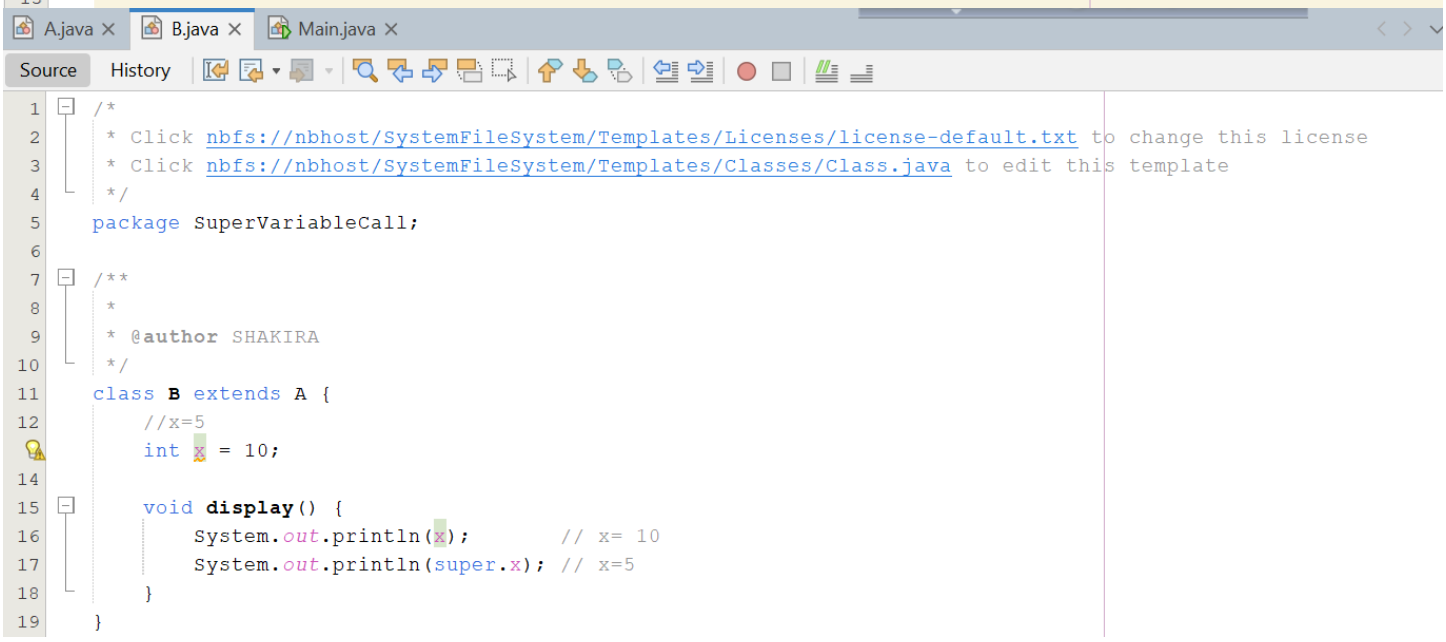

Output - StaticBlock_250221035 (run) ×

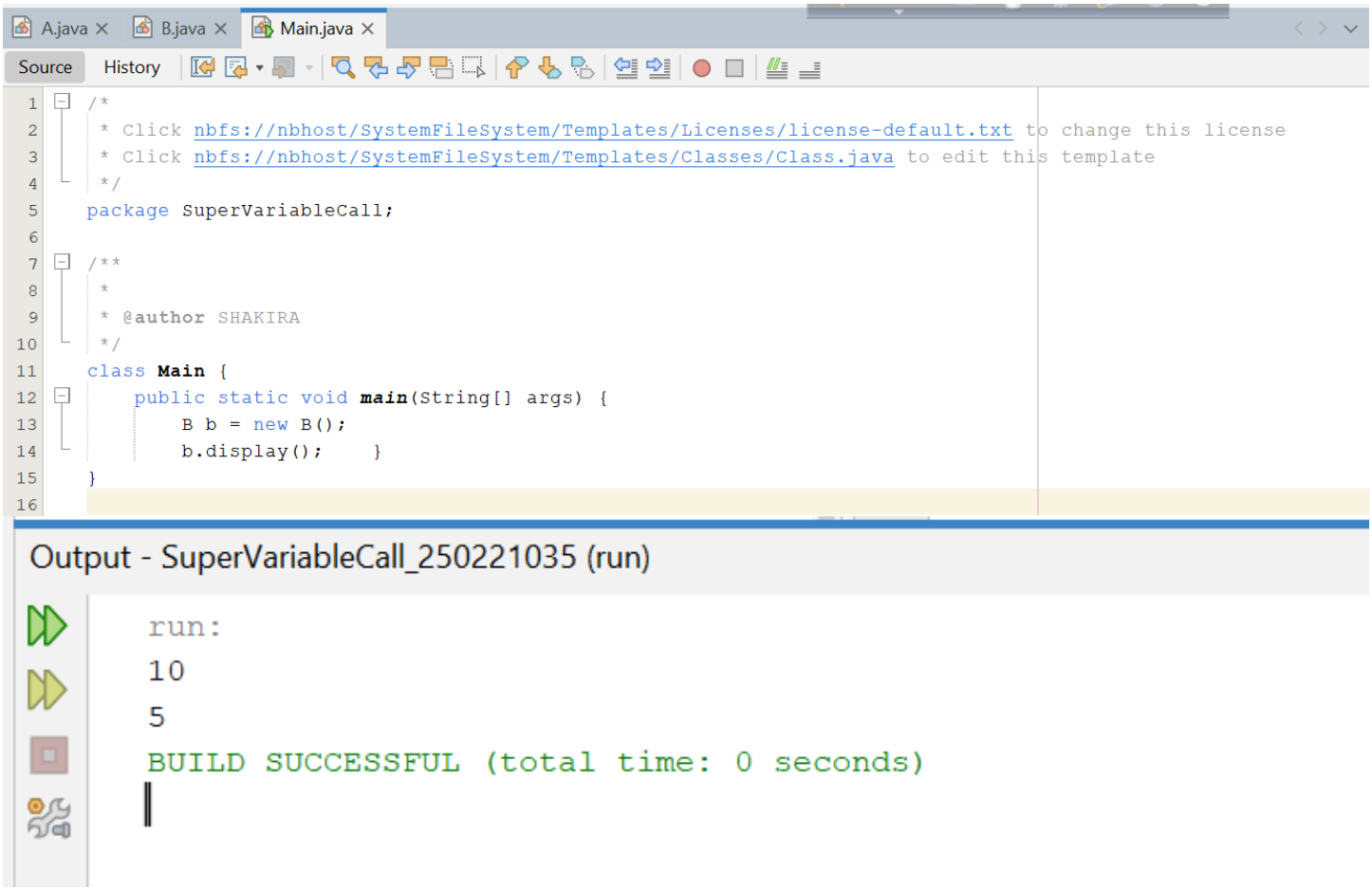
```
run:
30.2
10, 20.2
10
20.2
BUILD SUCCESSFUL (total time: 0 seconds)
```

4. SUPER KEYWORD VARIABLE CALL Program

```
class A {
    int x = 5;}

class B extends A {
    int x = 10;

    void display() {
        System.out.println(x);       // prints B's x
        System.out.println(super.x); // prints A's x
    }
}

class Main {
    public static void main(String[] args) {
        B b = new B();
        b.display();    }
}
```







5. SUPER KEYWORD METHOD CALL Program

```
class A {
    int x = 20;

    void info() {
        System.out.println("A");
    }
}

class B extends A {
    int x = 10;

    void display() {
        System.out.println(super.x); // 20
        super.info();                // "A"
    }
}

class Main {
    public static void main(String[] args) {
        B b = new B();
        b.display();
    }
}
```

A.java | B.java | Main.java

Source | History

```java
/*
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 */
package Super_MethodCall;

/**
 *
 * @author SHAKIRA
 */
class A {
    int x = 20;

    void info() {
        System.out.println("A");
    }
}
```

A.java | B.java | Main.java

Source | History

```java
/*
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 */
package Super_MethodCall;

/**
 *
 * @author SHAKIRA
 */
class B extends A {
    int x = 10;

    void display() {
        System.out.println(super.x); // 20
        super.info();                // "A"
    }
}
```

A.java | B.java | Main.java

Source | History

```java
/*
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 */
package Super_MethodCall;

/**
 *
 * @author SHAKIRA
 */
class Main {
    public static void main(String[] args) {
        B b = new B();
        b.display();
    }
}
```

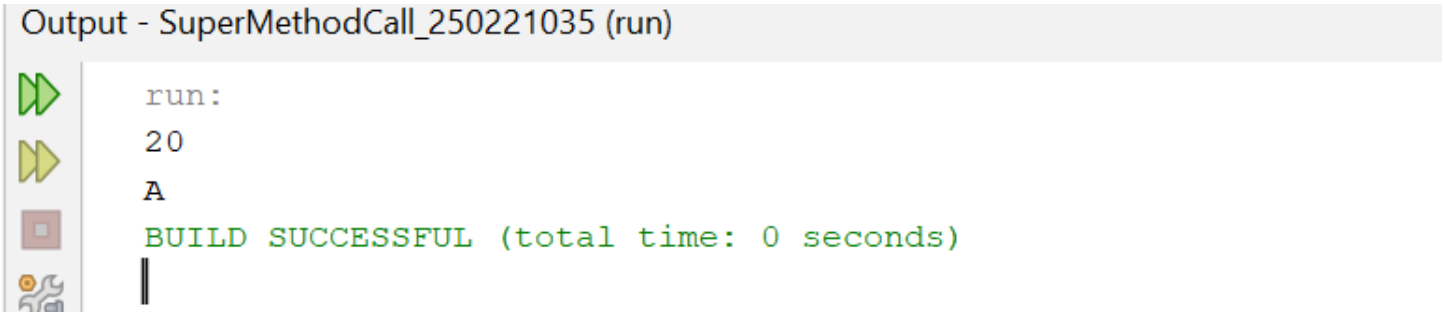

6. SUPER KEYWORD CONSTRUCTOR CALL Program

```
class A {

    A() {
        System.out.println("A");
    }
}

class B extends A {
    int x = 10;

    B() {                    // Child
        super();             // Calling A's constructor
        System.out.println("B");
    }

    void display() {
        System.out.println("Display method in B");
    }
}

class Main {
    public static void main(String[] args) {
        B b = new B();
        b.display();
    }
}
```

A.java | B.java | Main.java

Source | History

```java
/*
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 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
 */
package Super_ConstructorCall;

/**
 *
 * @author SHAKIRA
 */
class A {
    A() {                       // Parent
        System.out.println("A");
    }
}
```

A.java | B.java | Main.java

Source | History

```java
/*
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 */
package Super_ConstructorCall;

/**
 *
 * @author SHAKIRA
 */
class B extends A {
    int x = 10;

    B() {                       // Child
        super();                // Calling A's constructor
        System.out.println("B");
    }

    void display() {
        System.out.println("Display method in B");
    }
}
```

A.java | B.java | Main.java

Source | History

```java
/*
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 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
 */
package Super_ConstructorCall;

/**
 *
 * @author SHAKIRA
 */
class Main {
    public static void main(String[] args) {
        B b = new B();
        b.display();
    }
}
```

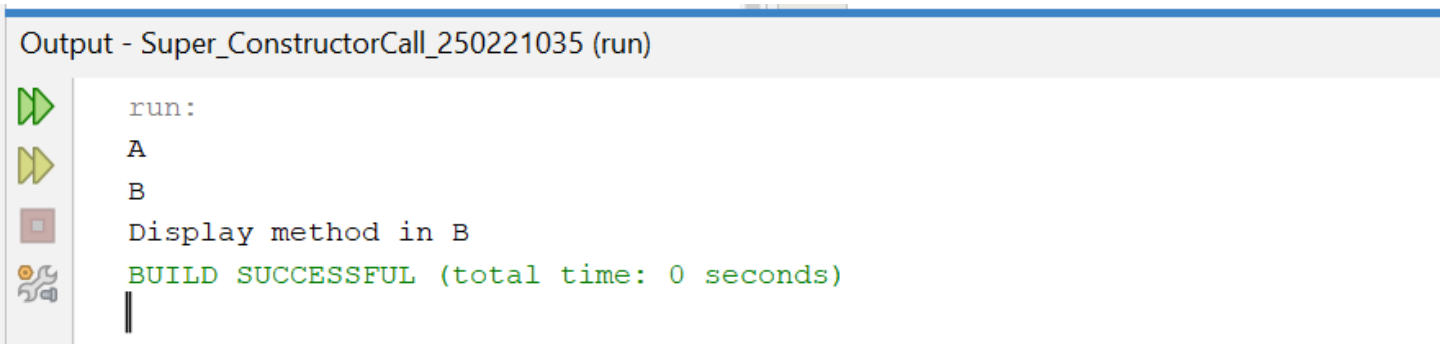

7. Vehicle and Car Example Program

```
class Vehicle {
    String color;
    double weight;

    Vehicle(String color, double weight) {
        this.color = color;
        this.weight = weight;
    }

    void attribute() {
        System.out.println("Color: " + color);
        System.out.println("Weight: " + weight);
    }
}

 class Car extends Vehicle {
    int gear;

    Car(String color, double weight, int g) {
        super(color, weight);  // calling Vehicle constructor
        gear = g;
    }

    void carInfo() {
        super.attribute();  // calling Vehicle method
        System.out.println("Car gear is = " + gear);
    }
}

class Main {
    public static void main(String[] args) {
        Car c1 = new Car("Red", 1500, 5);
        c1.carInfo();
    }

}
```

Vehicle.java × Car.java × Main.java ×

Source History

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
 */
package Vehicle_car;

/**
 *
 * @author SHAKIRA
 */
class Vehicle {
    String color;
    double weight;

    Vehicle(String color, double weight) {
        this.color = color;
        this.weight = weight;
    }

    void attribute() {
        System.out.println("Color: " + color);
        System.out.println("Weight: " + weight);
    }
}
```

Vehicle.java × Car.java × Main.java ×

Source History

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
 */
package Vehicle_car;

/**
 *
 * @author SHAKIRA
 */
public class Car extends Vehicle {
    int gear;

    Car(String color, double weight, int g) {
        super(color, weight);  // calling Vehicle constructor
        gear = g;
    }

    void carInfo() {
        super.attribute();  // calling Vehicle method
        System.out.println("Car gear is = " + gear);
    }
}
```

Vehicle.java × Car.java × Main.java ×

Source History

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
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 */
package Vehicle_car;

/**
 *
 * @author SHAKIRA
 */
class Main {
    public static void main(String[] args) {
        Car c1 = new Car("Red", 1500, 5);
        c1.carInfo();
    }

}
```

Output - Vehicle_250221035 (run)

```
run:
Color: Red
Weight: 1500.0
Car gear is = 5
BUILD SUCCESSFUL (total time: 0 seconds)
```