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Question: Create a class and determine if method overloading holds good for return type of method's or not.

Code:

```java
import java.util.Scanner;

public class Overload{
    public static void main(int a)
    {
        System.out.println("This is the int main");
    }

    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.println("Enter a number: ");
        int a = input.nextInt();
        System.out.println("This is the String args main");
        main(a);
    }
}
```

Output:

```
PS D:\OOPS-PCC-CS593\Day-9-(30.09.2020)> javac Overload.java
PS D:\OOPS-PCC-CS593\Day-9-(30.09.2020)> java Overload
Enter a number:
5
This is the String args main
This is the int main
```

Question: Overload the constructors for classes Area and Volume of a rectangular figure and also display its area and volume. Area is the superclass and Volume is the subclass.

Code:

```
class Area{
    int length, width;
    Area(int length, int width) {
        this.length = length;
        this.width = width;
    }
    int calArea() {
        return length * width;
    }
}

class Volume extends Area {
    int height;
    Volume(int length, int width, int height) {
        super(length, width);
        this.height = height;
    }
    int calVolume(){
        return length * width * height;
    }
}

public class AreaRectangle{
    public static void main(String[] args) {
        Area s = new Area(20, 8);
        System.out.println("Area  = "+s.calArea());
        Volume v = new Volume(20, 6, 5);
        System.out.println("Area 2 = "+v.calArea());
        System.out.println("Volume of Rectangle = "+v.calVolume());
    }
}
```

Output:

```
PS D:\OOPS-PCC-CS593\Day-9-(30.09.2020)> javac AreaRectangle.java
PS D:\OOPS-PCC-CS593\Day-9-(30.09.2020)> java AreaRectangle
Area  = 160
Area 2 = 120
Volume of Rectangle = 600
```