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Batch CSE - 06
Branch CSE
Subject Web Tech

Assignment 12

Ques 1

```java
import java.util.Scanner;

public class AirthmeticException {
    public static void main(String[] args) {
        int a, b, c;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter First Num: ");
        a = sc.nextInt();
        System.out.println("Enter Second Num : ");
        b = sc.nextInt();
        try {
            c = a/b;
```

```java
        System.out.println("Result : " + c);
    }

catch (AirthmeticException e)
    {
        System.out.println("Error : " + e);
    }
    System.out.println("End");
    }
}
```
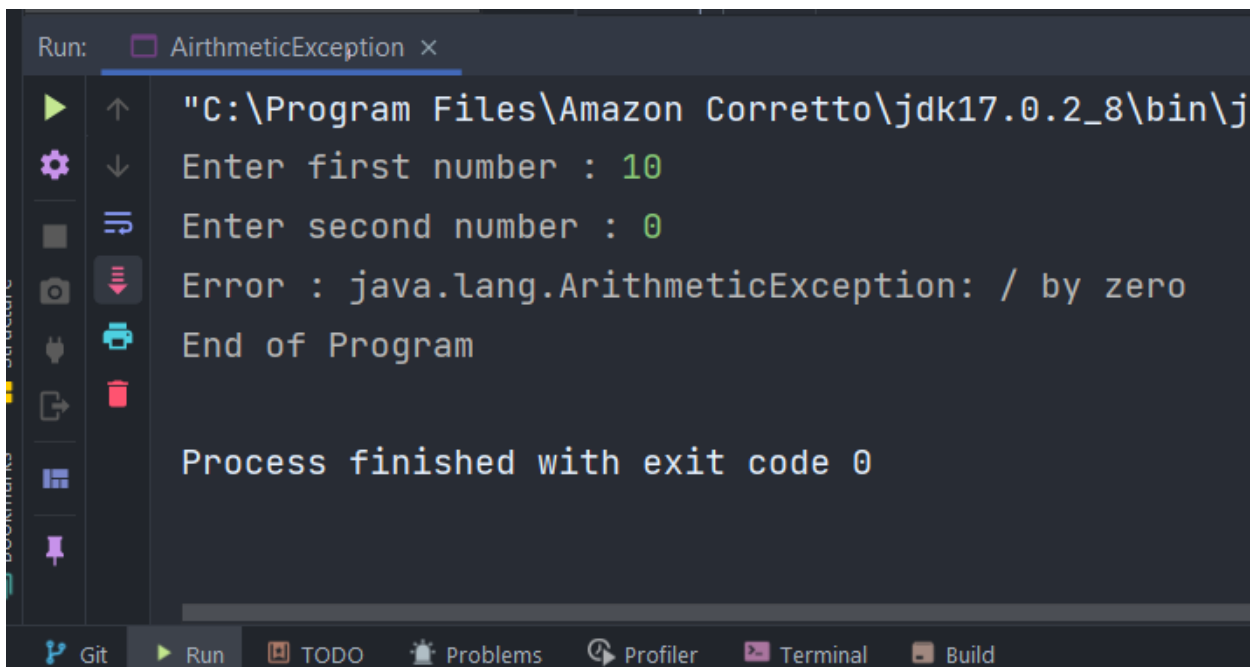
Ques 2

```java
public class SubClass {
    public static void main (String[] args) {
        try {
            int n = 1 % 0;
        }

        catch (Exception e) {
            System.out.println (e);
        }

        catch (ArithmeticException e) {
            System.out.println (e);
        }
    }
}
```
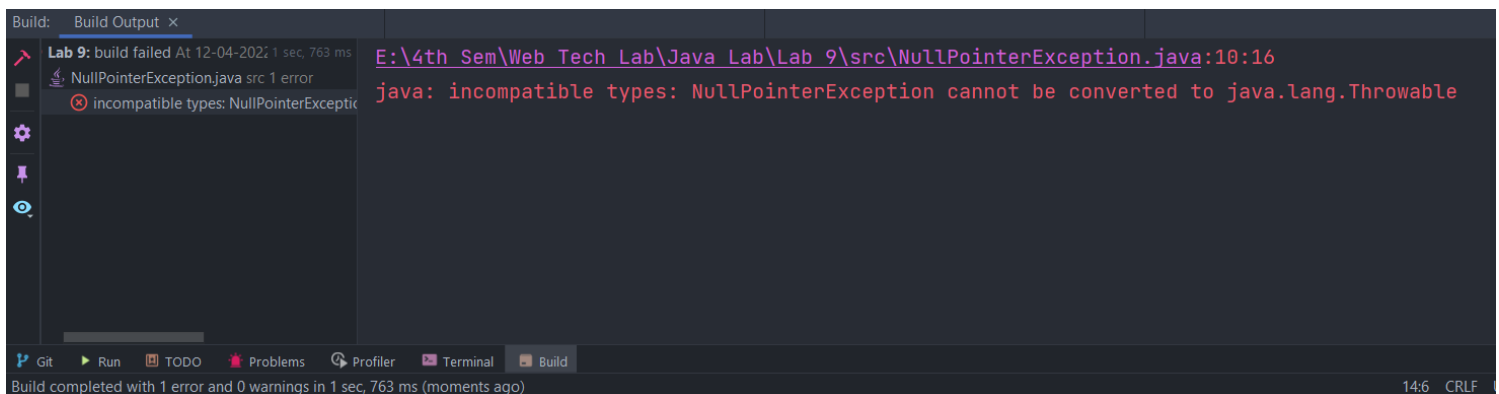
Build: Build Output ×

⊗ **Lab 9:** build failed At 12-12 sec, 227 ms   E:\4th Sem\Web Tech Lab\Java Lab\Lab 9\src\SubClass.java:10:10
  ⌃ SubClass.java src 1 error   java: exception java.lang.ArithmeticException has already been caught
    ⊗ exception java.lang.ArithmeticEx

Git   ▶ Run   TODO   Problems   Profiler   Terminal   Build
Build completed with 1 error and 0 warnings in 2 sec 227 ms (moments ago)
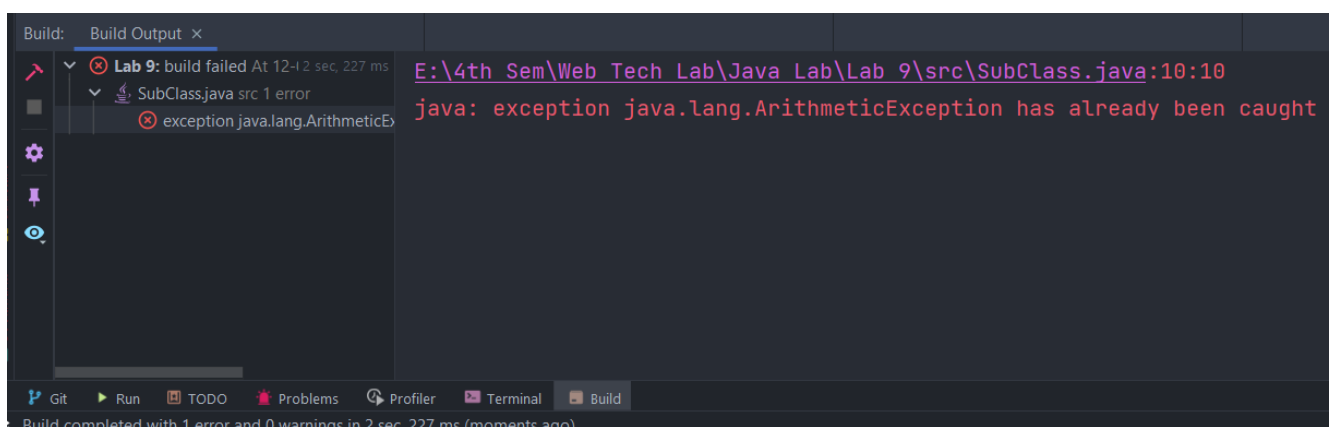
Ques 3
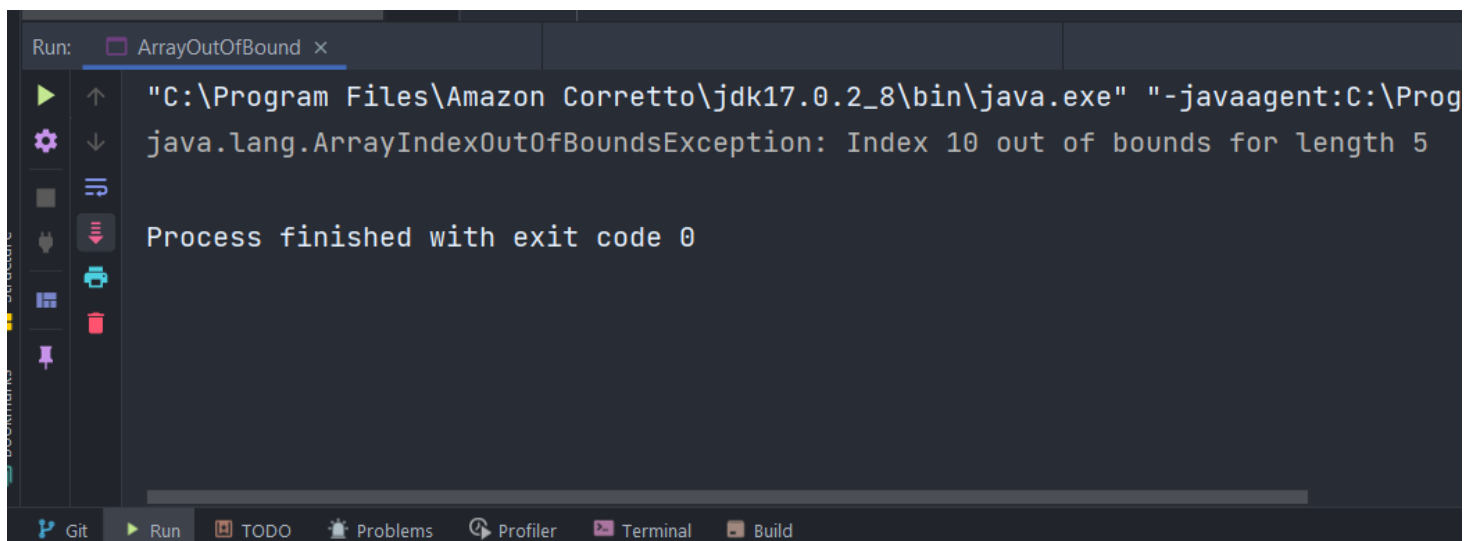
```java
public class NullPointerException {
    public static void main(String[] args) {

        String str = null;

        try {
            int x = str.length();
        }

        catch (NullPointerException e) {
            System.out.println(e);
        }
    }
}
```

Build: Build Output ×

Lab 9: build failed At 12-04-2022 1 sec, 763 ms   E:\4th_Sem\Web_Tech_Lab\Java_Lab\Lab_9\src\NullPointerException.java:10:16
NullPointerException.java src 1 error
   ⊗ incompatible types: NullPointerExceptic   java: incompatible types: NullPointerException cannot be converted to java.lang.Throwable

Git   ▶ Run   TODO   Problems   Profiler   Terminal   Build
Build completed with 1 error and 0 warnings in 1 sec, 763 ms (moments ago)   14:6   CRLF

```java
public class ArrayOutofBound {
    public static void main (String [] args) {
        int [] a = new int[5];

        try {
            int n = a[10];
        }

        catch (ArrayIndexOutOfBoundsException e) {
            System.out.println(e);
        }
    }
}
```

```
Run:    ☐ ArrayOutOfBound ×
  ▶  ↑    "C:\Program Files\Amazon Corretto\jdk17.0.2_8\bin\java.exe" "-javaagent:C:\Prog
  ⚙  ↓    java.lang.ArrayIndexOutOfBoundsException: Index 10 out of bounds for length 5
  ■  ⇛
  ⏻  ⬇    Process finished with exit code 0
     🖶
  ▤  🗑
  📌

⅄ Git   ▶ Run   ☐ TODO   ⚐ Problems   ⟁ Profiler   ▣ Terminal   ▪ Build
```

Ques 5

```java
class NegativeNumberException extends Exception {
    public NegativeNumberException() {
        super();
    }
    public String toString() {
        return "Negative Number Found";
    }
}


public class NegativeNumberDemo {
    public static void processInput(int x)
        throws NegativeNumberException {
        if (n < 0) {
            throw new NegativeNumberException();
        }
    }
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
```

```java
        int x = sc.nextInt();

        try {
            processInput(x);

        }

        catch (NegativeNumberException e) {
            System.out.println(e);

        }

        sc.close();

    }

}
```
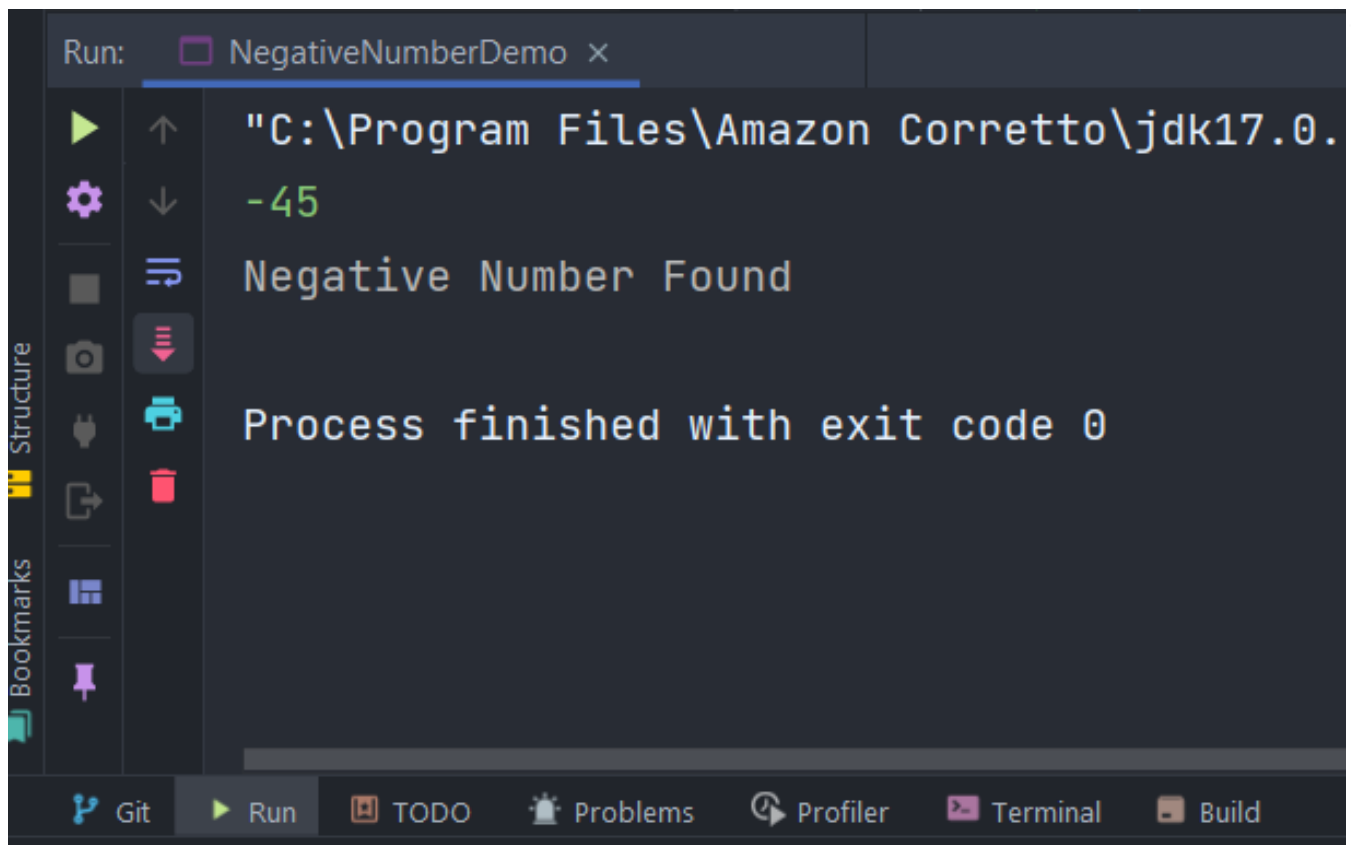
Ques 6

```java
import java.util.*;

class Hours_Exception extends Exception
{
    Hours_Exception(String s)
    {
        super(s);
    }
}

class Minutes_Exception(String s)
{
    Minutes_Exception(String s)
    {
        super(s);
    }
}

class Seconds_Exception extends Exception
{
    Seconds_Exception(String s)
    {
        super(s);
    }
}
```

```java
class Time {
    int hrs, min, sec;

    Time (int hrs, int min, int sec)
    {
        this.hrs = hrs;
        this.min = min;
        this.sec = sec;
    }

    void display() throws Hours_Exception, Minutes_Exception,
                          Seconds_Exception
    {
        if(hrs < 0 || hrs > 24)
        {
            throw new Hours_Exception("Hour value is
                greater than 24 or < 0");
        }
        else {
            System.out.println(hrs + "hr");
        }
        if (min < 0 || min > 60)
```

```java
        {
            throw new Minutes_Exception("Minute value is
                <0 or > 60");
        }
    else {
        System.out.println(min + "min");
    }
    if (sec < 0 || sec > 60) {
        throw new Seconds_Exception("Seconds value is <0 or
                                    >60");
    }
    else
    {
        System.out.println(sec + " sec");
    }
}
}
```

```java
public class TimeDemo {
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Hours: ");
        int hours = sc.nextInt();

        System.out.println("Minutes: ");
        int minutes = sc.nextInt();

        System.out.println("Seconds: ");
        int seconds = sc.nextInt();

        sc.close();

        Time mytime = new Time(hours, minutes,
            seconds);

        try {
            System.out.println("\n Time : ");
            mytime.display();
        }
        catch (HoursException e)
        {   System.out.println(e); }
```

```java
catch (Minutes_Exception e)
{
    System.out.println (e);
}

catch (seconds_Exception e)
{
    System.out.println (e);
}

}
}
```
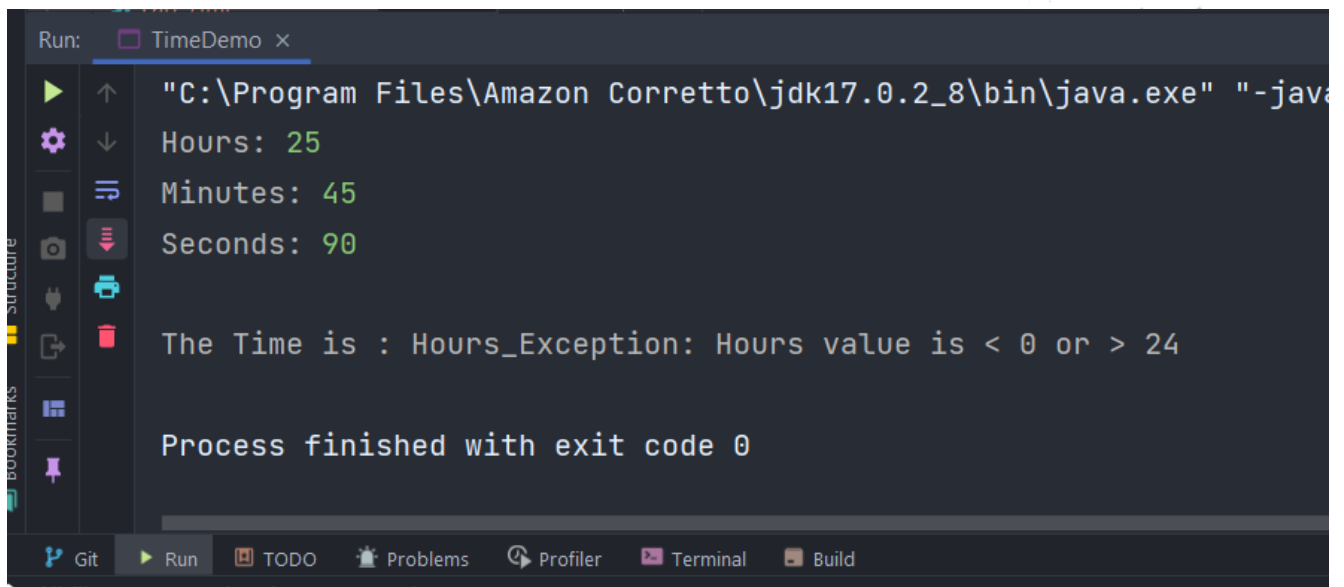
Ques 7

```java
class CheckArgumentException extends Exception {
    CheckArgumentException (String s) {
        super (s);
    }
}

public class CheckArgumentException Demo {
    public static int calculateSum (int args, int [] argumentsArray)
        throws CheckArgumentException
    {
        int sum = 0;
        if (args < 4)
        {
            throw new CheckArgumentException ("Argument
            passed is less than four");
        }
        else
        {
            for (int i = 0; i < args; i++)
            {
```

```java
            sum = sum + (argumentArray[i] *
                argumentsArray[i]);
        }
    }
    return sum;
}

public static void main(String[] args)
{
    int[] argumentsArray = new int[args.length];
    for (int i = 0; i < args.length; i++)
    {
        argumentsArray[i] = Integer.parseInt(args[i]);
    }
    try
    {
        int result = calculateSum(args.length,
                argumentsArray);
        System.out.println("Sum of square is : " +
                            result);
    }
```

```java
catch(CheckArgumentException e)
{
    System.out.println(e);
}

}

}
```

```
Run:    CheckArgumentExceptionDemo ×

"C:\Program Files\Amazon Corretto\jdk17.0.2_8\bin\java.exe"
CheckArgumentException: Arguments passed is less than four


Process finished with exit code 0

Git    Run    TODO    Problems    Profiler    Terminal    Build
```

Ques8

```java
public class Finally Demo
{
    public static void main (String [] args)
    {
        try
        {
            System.out.println (10 / 0);
        }
        catch (Airthmetic Exception e)
        {
            System.out.println (e);
        }
        finally
        {
            System.out.println (" Finally Block");
        }
        System.out.println (" End ");
    }
}
```

```
"C:\Program Files\Amazon Corretto\jdk17.0
java.lang.ArithmeticException: / by zero
finally block
End


Process finished with exit code 0
```

Git   ▶ Run   TODO   Problems   Profiler   Terminal   Build