



**PROGRAMME :
DIPLOMA IN INFORMATION TECHNOLOGY
(DIGITAL TECHNOLOGY)(DDT)**

**COURSE:
DFP30243 - OBJECT ORIENTED PROGRAMMING**

ASSESMENT	LABORATORY TASK 4	
NO	REGISTRATION NO	NAME
1.	32DDT20F2003	KHAIRUNNISA ISMA BINTI AB MAJIT
2.	32DDT20F2005	BUNGA SYAZWANIE BINTI MD TARMIZIE
3.	32DDT20F2029	MUHAMMAD AFIQ MUHAJMIN BIN MOHD ZAINI
PROGRAMME	DDT3A	

INSTRUCTIONS:

1. Answer **ALL** the questions.
2. Submission Date:

			
CODE / COURSE	DFP30243 - OBJECT ORIENTED PROGRAMMING	LABORATORY TASK	1+2+3+4
PROGRAM / CLASS	DDT3A	DURATION	2 HOURS
STUDENT'S NAME	KHAIRUNNISA ISMA BINTI AB MAJIT BUNGA SYAZWANIE BINTI MD TARMIZIE MUHAMMAD AFIQ MUHAMMIN BIN MOHD ZAINI	CLO	1P
REG. NO.	32DDT20F2003 32DDT20F2005 32DDT20F2029	TOTAL MARKS	/50
LECTURER'S NAME	PN. HAZLEENA BINTI OSMAN/ PN. RODZIAH BINTI IBRAHIM		

CLO1: Construct Object Oriented Programming concept and exception handling in Java programming (P4, PLO3)

Learning outcomes:

Upon completion of this lab, students should be able to:

1. Build Java program using Exception Handling

INSTRUCTION: Answer all questions.

QUESTION 1

The following program will get an input of radius and height from user and calculate a surface area of Cone. Rewrite the Java code below and use **exception handling** to handle the possible generated exception and display the output.

```
import java.io.*;

public class Area
{
    public static void main (String[] args) throws IOException
    {
        int height, radius;
        double SurfaceArea;

        BufferedReader input = new BufferedReader(new InputStreamReader(System.in));

        System.out.print("Enter height of cone : ");
        height = Integer.parseInt(input.readLine());
        System.out.print("Enter radius of cone : ");
        radius = Integer.parseInt(input.readLine());
        SurfaceArea = 3.142 * radius * radius * (height / 3);
        System.out.println("Surface Area of Cone = " + SurfaceArea);
    }
}
```

Sample Output:

Output 1: Output when all the input correctly inserted

General Output

```
-----Configuration: <Default>-----  
Enter height of cone : 5  
Enter radius of cone : 4  
Surface Area of Cone = 50.272  
  
Process completed.
```

Output 2: Output when height/radius incorrectly inserted

General Output

```
-----Configuration: <Default>-----  
Enter height of cone : thirty  
You entered non numeric format for radius/height  
  
Process completed.
```

General Output

```
-----Configuration: <Default>-----  
Enter height of cone : 6  
Enter radius of cone : seven  
You entered non numeric format for radius/height  
  
Process completed.
```

(25 marks)

A. Source code

***snip and paste your source code here. (Make sure it is snipped from your text editor/ java platform). Refer Appendix 1 for an example.**

```
import java.io.*;

public class Area {

    public static void main(String[] args) throws IOException {
        int height, radius;
        double SurfaceArea;

        BufferedReader input = new BufferedReader(new InputStreamReader(System.in));

        try {
            System.out.print("Enter height of cone : ");
            height = Integer.parseInt(input.readLine());
            System.out.print("Enter radius of cone : ");
            radius = Integer.parseInt(input.readLine());
            SurfaceArea = 3.142 * radius * radius * (height / 3);
            System.out.println("Surface Area Of Cone = " + SurfaceArea);
        } catch (NumberFormatException a) {
            System.out.println("You entered non numeric format for radius/height");
        }
    }
}
```

B. Output

***snip and paste your output here. (Make sure it is from your command prompt/ java platform). Refer Appendix 1 for an example.**

```
PS C:\Users\Emma\OneDrive\Documents
if ($?) { java Area }
Enter height of cone : 5
Enter radius of cone : 6
Surface Area Of Cone = 113.112
```

Error output:

```
cuments\SEM3\DFP 30243 OOP\JAVA\" ; if ($?) { jav
Enter height of cone : five
You entered non numeric format for radius/height
```

```
cuments\SEM3\DFP 30243 OOP\JAVA\" ; if ($?) { jav
Enter height of cone : 5
Enter radius of cone : six
You entered non numeric format for radius/height
```

QUESTION 2

Majlis Keselamatan Negara (MKN) had been instruct all the premises in Malaysia must be able to record the customer information including their body temperature before entering the premise. As a programmer in Laypark Sdn. Bhd., you need to construct a Java program to get an input of customer by incorporating the following:

- (i) Get the input name, phone number and body temperature from **FIVE (5)** customers using 'for' loop. If the customer input the non-numeric format for temperature, use suitable exception handling to catch the exception. Otherwise, print "*Welcome to Laypark*".
- (ii) Add a message "*Thank you. Have a nice day.*" regardless if the program raises an error or not.

Sample output: *(this sample only shows 2 out of 5 customers)*

Output 1: If all customers input the correct info.

```
=====
DATA COLLECTION : CUSTOMER [1]
=====
Insert name      : HAZLEENA
Insert phone no. : 019-56666663
Insert temperature: 36.4
Welcome to Laypark
=====
Thank You.
Have a nice day.
=====
DATA COLLECTION : CUSTOMER [2]
=====
Insert name      : RODZIAH
Insert phone no. : 017-56789099
Insert temperature: 37.0
Welcome to Laypark
=====
Thank You.
Have a nice day.
```

Output 2: If the customer input the incorrect temperature.

```
=====
DATA COLLECTION : CUSTOMER [1]
=====
Insert name      : HAZLEENA
Insert phone no. : 019-5666666
Insert temperature: 36.2
Welcome to Laypark
=====

Thank You.
Have a nice day.
=====

DATA COLLECTION : CUSTOMER [2]
=====
Insert name      : RODZIAH
Insert phone no. : 017-56789023
Insert temperature: THIRTY SEVEN
You enter temperature in wrong (non-numeric) format.
=====

Thank You.
Have a nice day.
```

(25 marks)

A. Source code

***snip and paste your source code here. (Make sure it is snipped from your text editor/ java platform). Refer Appendix 1 for an example.**

```
import java.io.*;

public class mysejahtera {
    public static void main(String[] args) throws IOException {
        BufferedReader input = new BufferedReader(new InputStreamReader(System.in));
        String name;
        String phoneNumber;
        double bodyTemperature;
        for (int i = 1; i <= 5; i++) {
            System.out.println(x: "=====");
            System.out.println("      Laypark's Cust Data Collection : Customer " + i);
            System.out.println(x: "=====");
            System.out.println(x: "Enter your name:");
            name = input.readLine();
            System.out.println(x: "Enter your phone number:");
            phoneNumber = input.readLine();
            try {
                System.out.println(x: "Enter your body temperature:");
                bodyTemperature = Double.parseDouble(input.readLine());
                System.out.println(x: "Welcome to Laypark");
                System.out.println(x: "=====");
            } catch (NumberFormatException wrongTemp) {
                System.out.println(x: "You have entered your body temperature in the wrong format (Non Numeric)");
                System.out.println(x: "=====");
            } finally {
                System.out.println(x: "Thank You");
                System.out.println(x: "Have a nice day");
            }
        }
    }
}
```

B. Output

***snip and paste your output here. (Make sure it is from your command prompt/ java platform). Refer Appendix 1 for an example.**

Notes: Please shows all 5 customers' detail.

```
=====
Laypark's Cust Data Collection : Customer 1
=====
Enter your name:
Afiq
Enter your phone number:
1546
Enter your body temperature:
36.0
Welcome to Laypark
=====
Thank You
Have a nice day
=====

Laypark's Cust Data Collection : Customer 2
=====
Enter your name:
Ema
Enter your phone number:
489748
Enter your body temperature:
36.0
Welcome to Laypark
=====
Thank You
Have a nice day
=====

Laypark's Cust Data Collection : Customer 3
=====
Enter your name:
Zul
Enter your phone number:
4869
Enter your body temperature:
36.0
Welcome to Laypark
=====
Thank You
Have a nice day
=====
```

```
=====
Laypark's Cust Data Collection : Customer 4
=====
Enter your name:
Husni
Enter your phone number:
1484
Enter your body temperature:
36.0
Welcome to Laypark
=====
Thank You
Have a nice day
=====

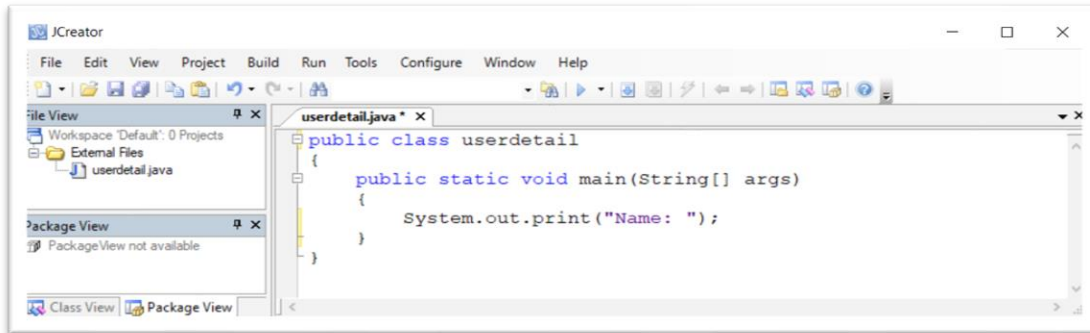
Laypark's Cust Data Collection : Customer 5
=====
Enter your name:
Mas
Enter your phone number:
1548
Enter your body temperature:
36.0
Welcome to Laypark
=====
Thank You
Have a nice day
```

Error output:

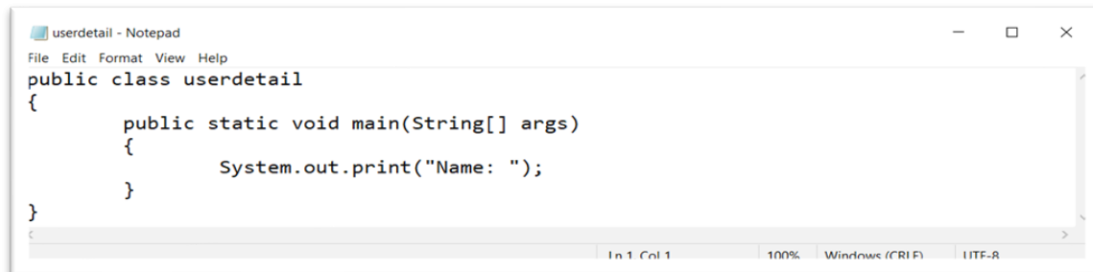
```
=====
Laypark's Cust Data Collection : Customer 1
=====
Enter your name:
Hai
Enter your phone number:
64899
Enter your body temperature:
tigapuluhdua
You have entered your body temperature in the wrong format (Non Numeric)
=====
Thank You
Have a nice day
```


Example of source code:

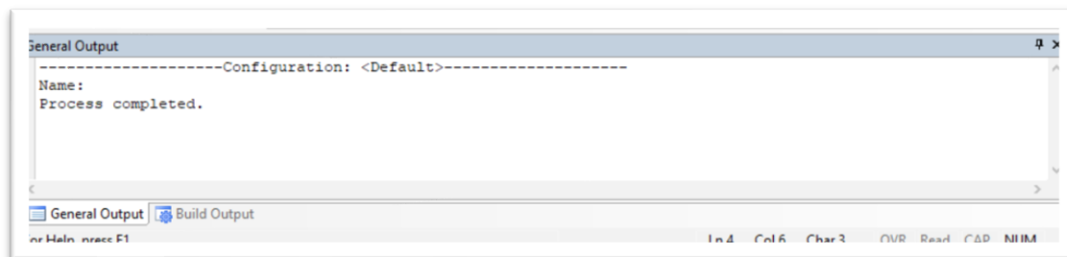
- i) If you use Java platform to write the source code



- ii) If you use text editor to write the source code

**Example of output:**

- i) If you use Java platform to compile and execute



- ii) If you use Command Prompt to compile and execute

