**Exercises on Conditional Statements**

**Level - Easy**

**1.**

Write a C program to accept two integers and check whether they are equal or not.

**Sample test cases:**

**Test case 1:**

**Input:**

15 15

**Expected Output:**

Number1(15) and Number2(15) are equal.

**Test case 2:**

**Input:**

25 46

**Expected Output:**

Number1(25) and Number2(46) are not equal.

**2.**

Write a C program to find the biggest number of two given numbers.

**Sample test cases:**

**Test case 1:**

**Input:**

2 4

**Expected Output:**

4 is the biggest

**Test case 2:**

**Input:**

42 12

**Expected Output:**

42 is the biggest

**Test case 3:**

**Input:**

21 21

**Expected Output:**

Both are equal

**3.**

Write a C program to read an integer n and display 1 when n is larger than 0, 0 when n is 0 and -1 when n is less than 0.

**Sample test cases:**

**Test case 1:**

**Input:**

-5

**Expected Output:**

-1

**Test case 2:**

**Input:**

16

**Expected Output:**

1

**Test case 3:**

**Input:**

0

**Expected Output:**

0

**4.**

Write a C program to calculate profit and loss on a transaction.

**Sample test cases:**

**Test case 1:**

**Input:**

500 700

**Expected Output:**

Profit: 200

**Test case 2:**

**Input:**

1000 600

**Expected Output:**

Loss: 400

**5.**

Write a program in C to read any digit, display it in the words.

**Sample test cases:**

**Test case 1:**

**Input:**

4

**Expected Output:**

Four

**Test case 2:**

**Input:**

6

**Expected Output:**

Six

**6.**

Write a program in C to read any Month Number in integer and display Month name in the word.

**Sample test cases:**

**Test case 1:**

**Input:**

7

**Expected Output:**

July

**Test case 2:**

**Input:**

12

**Expected Output:**

December

**7.**

Write a program in C to read any Month Number in integer and display the number of days for this month (Ignore leap year).

**Sample test cases:**

**Test case 1:**

**Input:**

8

**Expected Output:**

August has 31 days

**Test case 2:**

**Input:**

2

**Expected Output:**

February has 28 days

**8.**

Write a C program to read temperature in centigrade and display a suitable message according to temperature state below:

Temp < 0 then Freezing weather

Temp 0-9 then Very Cold weather

Temp 10-19 then Cold weather

Temp 20-29 then Normal Temperature

Temp 30-39 then Its Hot

Temp >=40 then Its very Hot

**Sample test cases:**

**Test case 1:**

**Input:**

28

**Expected Output:**

Normal Temperature

**Test case 2:**

**Input:**

42

**Expected Output:**

It’s very hot

<---\*\*\* End of Level Easy \*\*\* --->

**Level – Medium**

**1.**

Write a program in C to accept a grade and declare the equivalent description:

Grade Description

E Excellent

V Very Good

G Good

A Average

F Fail

**Sample test cases:**

**Test case 1:**

**Input:**

A

**Expected Output:**

Average

**Test case 2:**

**Input:**

V

**Expected Output:**

Very Good

**2.**

Write a C program to check whether an alphabet is a vowel or consonant.

**Sample test cases:**

**Test case 1:**

**Input:**

a

**Expected Output:**

a is an vowel

**Test case 2:**

**Input:**

V

**Expected Output:**

V is a consonant

**3.**

Write a C program to read roll no and marks (out of 100) of three subjects (Physics, Chemistry and Computer Science respectively) and calculate the total, percentage and division.

**Division Table**

|  |  |
| --- | --- |
| **Division** | **Percentage Range** |
| First | 80 and above |
| Second | Between 70 and 79 |
| Third | Between 60 and 69 |
| Fourth | Between 50 and 59 |
| Fail | 49 and below |

**Sample test cases:**

**Test case 1:**

**Input:**

784

70

80

90

**Expected Output:**

Roll number: 784

Marks in Physics: 70

Marks in Chemistry: 80

Marks in Computer Science: 90

Total Marks: 240

Percentage: 80.00

Division: First

**Test case 2:**

**Input:**

789

65

55

40

**Expected Output:**

Roll number: 789

Marks in Physics: 65

Marks in Chemistry: 55

Marks in Computer Science: 40

Total Marks: 160

Percentage: 53.33

Division: Fourth

**4.**

Write a program in C to calculate and print the Electricity bill of a given customer. The customer id and unit consumed by the user should be taken from the keyboard as inputs and display the total amount to pay to the customer. The charges are as follow:

|  |  |
| --- | --- |
| **Unit(s)** | **Charge/Unit** |
| Up to 199 | @1.20 |
| 200 and above but less than 400 | @1.50 |
| 400 and above but less than 600 | @1.80 |
| 600 and above | @2.00 |

If bill exceeds Rs. 400 then a surcharge of 15% will be charged.

**Sample test cases:**

**Test case 1:**

**Input:**

1001

800

**Expected Output:**

Customer ID: 1001

Units Consumed: 800

Amount Charges: 1600.00

Surcharge Amount: 240.00

Net Amount Paid By the Customer: 1840.00

**Test case 2:**

**Input:**

1002

250

**Expected Output:**

Customer ID: 1002

Units Consumed: 250

Amount Charges: 375.00

Surcharge Amount: 0.00

Net Amount Paid By the Customer: 375.00

**Test case 3:**

**Input:**

1003

460

**Expected Output:**

Customer ID: 1003

Units Consumed: 460

Amount Charges: 828.00

Surcharge Amount: 124.20

Net Amount Paid By the Customer: 952.20

**5.**

Write a program in C which is a Menu-Driven to perform a simple calculation.

|  |  |
| --- | --- |
| **Menu** | |
| **Item** | **Description** |
| 1 | + |
| 2 | - |
| 3 | x |
| 4 | / |
| 5 | % |

**Sample test cases:**

**Test case 1:**

**Input:**

10

2

3

**Expected Output:**

10 x 2 = 20

**Test case 2:**

**Input:**

12

5

4

**Expected Output:**

12 / 5 = 2.40

**6.**

Write a C program to check whether a character is an alphabet, digit or special character.

**Sample test cases:**

**Test case 1:**

**Input:**

@

**Expected Output:**

Special character

**Test case 2:**

**Input:**

2

**Expected Output:**

Digit

**Test case 3:**

**Input:**

z

**Expected Output:**

Alphabet

**7.**

Write a C program to find the largest of three numbers.

It is guaranteed that the three numbers will be different.

**Sample test cases:**

**Test case 1:**

**Input:**

12

96

31

**Expected Output:**

31 is the largest

**Test case 2:**

**Input:**

1234

4321

5324

**Expected Output:**

5324 is the largest

**Test case 3:**

**Input:**

-10

-42

-1

**Expected Output:**

-1 is the largest

<---\*\*\* End of Level Medium \*\*\* --->