

## Practice 6 – Decision Making

**Q1.** Generate two random numbers in range 1 to 5. Check if their absolute difference is less than equal one, print almost equal, otherwise print not equal:

**Sample Runs:**

First Number: 2  
Second Number: 5  
Numbers are not equal

First Number: 2  
Second Number: 3  
Numbers are almost equal

First Number: 4  
Second Number: 3  
Numbers are almost equal

First Number: 5  
Second Number: 3  
Numbers are not equal

**Q2.** Extend Q1 and print a third message, “Numbers are exactly equal”, if both numbers are same:

**Sample Runs:**

First Number: 2  
Second Number: 5  
Numbers are not equal

First Number: 2  
Second Number: 3  
Numbers are almost equal

First Number: 3  
Second Number: 3  
Numbers are exactly equal

First Number: 5  
Second Number: 3  
Numbers are not equal

**Q3.** Generate random marks 0 to 100. Calculate and print grade using following table:

>= 85	A
>= 80	A-
>= 75	B+
>= 70	B
>=65	B-
>=61	C+
>=58	C
>=55	C-
>=50	D
<50	F

**Sample Runs:**

Marks: 67

Grade: B-

Marks: 81

Grade: A-

Marks: 62

Grade: C+

**Q4.** A shop keeper has pack of 6 eggs and he sells eggs in packs, customer has to purchase number of packs according to their requirements. Write a program to input number of eggs and print minimum number of packs required by the customer?

**Sample Runs:**

Eggs: 15

Packs: 3

Eggs: 12

Packs: 2

Eggs: 19

Packs: 4

**Q5.** Input width and length of two rectangles. Find area of both rectangles. Check and print, which rectangle is smaller?

**Sample Runs:**

Width of first rectangle: 5

Length of first rectangle: 3

Width of second rectangle: 6

Length of second rectangle: 2

ResultS second rectangle is smaller

Width of first rectangle: 4

Length of first rectangle: 4

Width of second rectangle: 7

Length of second rectangle: 3

Result: First rectangle is smaller

