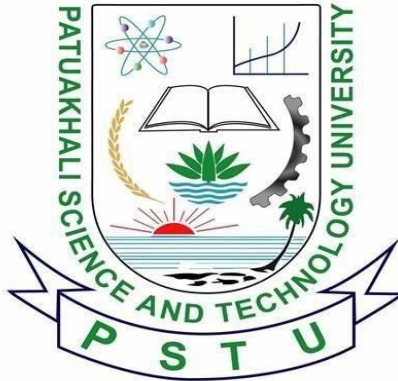


PATUAKHALI SCIENCE AND TECHNOLOGY UNIVERSITY



Course Code: CIT-112

SUBMITTED TO:

Dr. MD Abdul Masud Sir

Department of Computer Science And Communication

Engineering

Faculty of Computer Science And Engineering

SUBMITTED BY:

Name: MD Noushad Bhuiyan

ID: 2102038, Registration No: 10165

Faculty of Computer Science and Engineering

Chapter 4

Operators and Expression

Programming Exercises

4.1 On this problem if we give one number as an input computer will take the input and it will give the right sided digit of the number as a output. Such as : if we give input: 1234 than the system will give output 4 which is right side digit of the number.

4.2 This is same program as 4.1 . There is a little change in this program. In this program output will be 2 right digits of the input number. For example if input is 2123 than the output will be 23.

4.3 In this program if we input a integer value to the system it will give us a output of a pattern. For example if the input is 5 than the pattern will be like :

```
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

4.4 The following program is a mathematical term where inputs are purchase price, salvage value, years of service and Depreciation. In this program we need salvage value. So we create a formula for find out salvage value. The formula is

Salvage value = purchase price - (years of service * depreciation)

Other data will be inputted by the person who run the program.

4.5 Problem

4.6 In this program person will give input for acceleration, initial velocity and time and the program will initialize coder data and give the distance as output he travelled based on the input.

4.7 In this program person will get two output named TBO and EOQ. But for this output person have to give some input to the system. inputs are demand rate, setup cost, holding cost per item unit time. After giving those input the system will initialize those data and calculate it with two formula. One is for TBO and other is for EOQ.

Formula's are

$$EOQ = \sqrt{\frac{2 \times \text{demand rate} \times \text{setup costs}}{\text{holding cost per item per unit time}}}$$
$$TBO = \sqrt{\frac{2 \times \text{setup costs}}{\text{demand rate} \times \text{holding cost per unit time}}}$$

Example:

Input:

demand rate: .02

setup cost: 3400

holding cost per item per unit time: 40000

Output:

TBO is : 2.915

EOQ is : 0.058

4.8 It is program related to electrical circuit. In this problem we need in give input for resistance, inductance, capacitance than the system will give us frequency as output.

4.9 This program will read 4 digits number and than it will sum all the digit given by the programmer as output.

Example

input

Number of four digits: 3121

Output

Sum of digits are : 7

4.10 This program will read three integer number as input and than program will give us the biggest number from the following three numbers.

Example

input

1st number:

2

2nd number:

3

3rd number:

21

Output

21 is large number.

- 4.11 read two integer values m and n and to decide and print whether m is a multiple of n

Example

Input

M=5

Output

M =5;N=25

- 4.12 this program will read three number as input and than give us output as biggest number, smaller number, sum of three numbers, average of three number.

Example

Input

1st number:

12

2nd number:

33

3rd number:

11

Output

33 is large number.

11 is small number.

The sum of three digits are: 56

The average of three digits are: 18

- 4.13 Problem

4.14 This program will read one angle value and give output for the following value's sin and cos value. For example if we give 0 as input the program will give us two out for sin0 and cos0

4.15 This program will read a number as an input and it will give us the square and square root value of that number.

For example if we give 100 as a input than it will give us two output 10 for square root and 10000 for square.

4.16 Problem

4.17 This program will read an integer value and at 1st it will be transferred to binary digit. And we all know a binary digit takes 8 bit for a value. For example if we give 5 as an input than it will be transferred to 00000101 as a binary digit. When we shift the given data (5) by two bits to the left than it will converted to 00010100 and than this binary digit will convert to integer digit and will give us output. For example if we input 5 it will give us 20 as output.

4.18 On this program we need to give three input (a,b,c) to the program and it will give us a value which is based on the following formula ($x = a - b/3 + c*2 - 1$).

Example

input

a: 3

b: 4

c: 1

output

The value of x is = 2.67

4.19 This program will read a date value as input and determine whether the entered day, month, and year values are valid.

Example

input

days numbers: 2131

Output

5 years, 10 months, 0 weeks, 6 days

4.20 Problem

4.21 This program will read two integer as input and perform a division. If the divisor is 0 than there will be a error on the program.

Example

Input

X=120

Y=10

Output

12

4.22 This program will read Four number as input and will do the following formula based equation given below

$x=(a+b)*(c/d);$

$y=(a+b)*c/d;$

$z=a+(b*c)/d;$

than it will print all the value of x, y, z

Example

Input

a: 31

b: 22

c: 11

d: 42

output

The 1st value is: 13.88

The 2nd value is: 13.88

The 3rd value is: 36.76

Chapter 5

Managing input and output operator

5.1 In this program we will read a string input “ WORD PROCESSING”. And make three code for three output. Those three output will be:

(a) WORD PROCESSING

(b) WORD
PROCESSING

(c) W.P.

5.2 This program will read two input in x,y than give three output based on those formula below:

$$a=(x+y)/(x-y)$$

$$b=(x+y)/(x)$$

$$c=(x+y)*(x-y)$$

Example:

Input

x and y: 45 ,34

Output

a = 7.18 b = 1.76 c = 869.00

5.3 In this program if we take decimal value such as (4.5,6.7) than it will show us the closest integer value of the input value. Just like 4.5 will show 5 and 4.3 will show 4.

Example

Input

4.56 and 5.32

Output

5 and 5

5.4 In this program if we input 5 than it will show a pattern with 5 raw and 4 colomb with * symbol.

Example

Input : 5

Output

* * * *

* * * *

* * * *

* * * *

* * * *

5.5 This is a program of a multiplication.in this program we can see full detail of a multiplication.

Example

input

two digits multiplicand: 45

two digits multiplier: 31

Output

```
      45
    * 31
    ---
1 * 45 is 45
3 * 45 is 1350
    ---
   1395
```

5.6 In this program system will read three input with scanf and at 1st we will get output using three printf and then we will get all output using one printf and then we will print three number without using scanf.

5.7 In this program the system will read a number such as : 10.45678 than system will printf this number with 2 decimal places at 1st and then it will print this number with 4 decimal places and then at last the system will print this number with 6 decimal places.

5.8 This is same program as 5.7 . This program the input is 345.6789 and it will give three output. At 1st output their will 2 decimal places at right, another output will have 5 decimal places and the remaining one will take 0 decimal places.

Example

Input

345.6789

Output

345.68

345.67890

346

5.9 In this program we need to give a string (ANIL KUMAR GUPTA) as input than we need to write a program which will return me three output which are given below:

(a) ANIL K. GUPTA

(b) A.K. GUPTA

(c) GUPTA A.K.

5.10 In this program we will Write a program to read and display the following table of data.

Name	code	Price
------	------	-------

fan	67831	1234.50
Motor	450	5786.70

5.11 Problem

5.12 Problem

5.13 In this program we will convert dollars in euro and INR

Example

input

your money in dollar: 32

output

The euro value of the money is: 29.44

The INR value of the money is: 2629.76

5.14 This is a pattern type program where if we input 5 it will give us the following

output

1 2 3 4 5

1 2 3 4

1 2 3

1 2

1

5.15 This program will read the investment value. rate of interest and time are already set by the programmer and after that the program will process the value to find out fixed deposit cumulative and print it out on the screen.

Example

Input

Investment amount: 3532

Output

fixed deposit cumulative is: 6622.50

Signature