1

Write a C program to store numbers in an array called **numArr**. The series of numbers should be entered through keyboard and assume that the user enters only 6 numbers. Go through the array and find the store the odd and even numbers in two different arrays called **oddNum** and **evenNum** respectively. Display the all three arrays as shown below.

Save the program as ITXXXXXXXX.c

Sample Output:

Number series: 23 45 86 79 12 1

Odd Numbers : 23 45 79 1

Even Numbers: 86 12

2

Write a C program to store numbers in an array called **intArr**. A series of integer numbers should be entered through keyboard and assume that the user enters only 10 numbers. Go through the array and find the store the positive and negative numbers in two different arrays called **positiveNum** and **negativeNum** respectively. Display the all three arrays as shown below.

Save the program as ITXXXXXXXX.c

Sample Output:

Number series: -1 0 21 -34 23 -19 -12 89 56 95

Positive Numbers : 0 21 23 89 56 95

Negative Numbers: -1 -34 -19 -12

3

Write a C program to store numbers in an array called **myArray**. The series of numbers should be entered through keyboard and assume that the user enters 10 numbers. Go through the array and find the average of the numbers. Find and store the numbers that are greater than the average to another array called **largeNum**. Display the content of the **myArray** and **largeNum** arrays.

Save the program as ITXXXXXXXX.c

Sample Output:

Enter the number series: 2 3 5 8 6 9 1 2 1 5

Average : 4.2

myArray : 2 3 5 8 6 9 1 2 1 5

largeNum: 5 8 6 9 5

4

Write a C program to read 8 integers (between 1 - 4) from the keyboard and store those in an array called **num**. If the user input an invalid number, ask to re-enter the number again. Display the num array and count and display the number of times the pattern "1 3" appear in the num array.

Save the program as ITXXXXXXX.c

Sample Output:

num array : 1 4 **1 3 1 3** 2 1

Number of times the pattern "1 3" appear: **2**

5

Write a C program to read 6 numbers from the keyboard and store in an array called arrNum. Display the numbers stored in the array. Next, go through the array and check if the numbers are stored in the ascending order. If not display a message "Numbers are not stored in ascending order". Otherwise display "Numbers are stored in ascending order"

Save your program as ITXXXXXX.c

Sample output1:

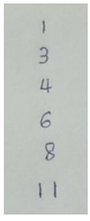
Enter values to the Array :

5
6
9
1
7
6

Numbers are not stored in ascending order.

Sample output2:

Enter values to the Array :



Numbers are stored in ascending order.

6

A company wants their customers to rate their services from 1 to 5. They wish to summarize the number of responses from their customers using an array. Array element 0 store the number of response for rate 1. Array element 1 store the number of response for rate 2 and so on. Write a C program to do the following:

a) Declare an one dimensional integer array called **rate** of size 5.
b) Initialize all the array elements to zero.
c) Read the ratings (number between 1 to 5) from the keyboard. Store the number of responses for each rate in the array. You should read the responses until user input -1. If the user input a number less than 1 or greater than 5 , display an error message.
Input format:

Pls input the service rating (1- 5): 2
Pls input the service rating (1- 5): 1
Pls input the service rating (1- 5): 4
Pls input the service rating (1- 5): 4
Pls input the service rating (1- 5): -1

d) Display the number of response from each rating.

Rating	Number of response
1	1
2	1
3	0
4	2
5	0

7

An air line uses an array to do their seat reservations. Seats are numbered from 1 to 10. In the array, each element represents a seat number as shown below.

0	1	2	3	4	5	6	7	8	9
S1	S2	S3	S4	S5	S6	S7	S8	S9	S10

If a seat is available it is indicated by setting the array element to 0 and if a seat is reserved it is indicated by setting the array element to 1.

Write a C program to implement the above described seat reservation system.

a) Declare an one dimensional integer array called **seat** of size 5.
b) Initialize all the array elements to zero.
c) Ask the user to input the seat number (1 to 10) that he/she wants to reserve. If the seat is available do the reservation. If not display a message to the user, saying that the seat is already reserved. You should read the responses until user input -1. If the user input a number less than 1 or greater than 10, display an error message.

Pls input the seat number (1- 10): 2
Pls input the seat number (1- 10): 5
Pls input the seat number (1- 10): 2
Sorry. The seat 2 is reseved.
Pls input the seat number (1- 10) :7
Pls input the seat number (1- 10) :11
Sorry. Please input a valid seat number.
Pls input the seat number (1- 10): -1

d) Display the reserved seat numbers.

8

A company uses an array to store the sales done by their salespeople for a given month. Write a C program to do the following.

a) Declare a double array called **sales** of size 5.
b) Initialize all the array elements to 0.
c) Input the sales of 5 salespeople from the keyboard and store them in the array. If the user input a negative value, display an appropriate error message and ask to re-enter the sales amount.

   Input format:

   Input the sales of salesmen 1 : 20000.00
   Input the sales of salesmen 2 : 15000.00
   Input the sales of salesmen 3: -1200
   Please re-enter the amount
   Input the sales of salesmen 3: 7500.00

   ……..
   ……..

d) The company decided to give a fixed allowance, 5000.00 rupees for the salespeople who has done sales more than 20000.00
   Display the sales person number and the sales amount of the people who has satisfy the above criteria.

Sales person number	**Sales amount**
1	xxxxxx
2	xxxxxx

9

A book store uses an array to store the prices of the books.

Write a C program to do the following.

a) Declare a double array called **price** of size 6.
b) Initialize all the array elements to 0.
c) Input the prices of 6 books from the keyboard and store them in the array. If the user input zero or a negative value, display an appropriate error message and ask to re-enter the price.

   Input format:

   Input the price of book 1 : 200.00
   Input the price of book 2 : 250.00
   Input the price of book 3 : 0
   Please re-enter the amount
   Input the price of book 4 : 150.00
   ……..
   ……..

d) The book store decided to reduce the price of all the books in the store by 10%. Update the array with new prices.

e) Display the new price list as shown below.

Book ID	**Price**
1	180.00
2	225.00
3	…….
4	…….

10

A company uses an array to store the salaries of their employee's. Write a C program to do the following.

a) Declare a double array called **salarie**s of size 5.
b) Initialize all the array elements to -1.
c) Input the salaries of 5 employee's from the keyboard and store them in the array. If the user input a negative value, display an appropriate error message and ask to re-enter the salary.

   Input format:

   Input the salary of employee 1 : 20000.00
   Input the salary of employee 2: 15000.00
   Input the salary of employee 3: -1200
   Please re-enter the amount
   Input the salary of employee 3: 7500.00

   ……..
   ……..

d) The company decided to give a 10% increment for the employee's whose salaries are below 10000.00. Update the array accordingly.
e) Display the employee number and the new salaries in the following format.

Employee number	**Salary**
1	xxxxxx
2	xxxxxx