

INTRODUCTION TO PROGRAMMING LAB (IIT110)

LAB 10

QUESTION 1.

- a) Write a program to swap two numbers using call by reference.
- b) Write a program which reverses the input array. For this, use a function which takes array as the input and returns the reverse array. The size of the array should also be given by user.

QUESTION 2.

A digital image is a 2-D array of integers. Let's consider that the array dimension and values are supplied from the console by an user. Write a program to store the image in a dynamically allocated memory space.

Write a function to get the mirror image of the input matrix with respect to middle row of the matrix, so for example, if M= 4, N= 3 and the input matrix is given as

```
1  2  3
4  5  6
7  8  9
10 11 12
```

then the function will alter this to:

```
10 11 12
7  8  9
4  5  6
1  2  3
```

QUESTION 3.

Suppose there is a program to store the batting-records of cricketers of India for a particular match. Write a function to display the names of all the batsmen in the console in descending order of the runs scored by them in that particular match.

Hint: Consider a structure (called record) that stores the following elements: full_name, total_runs, total_balls. Read the values from the console. Dynamically allocate an array of pointers to structures (of type record)

QUESTION 4.

Write a program to write the full name and age the younger one among the group of 3 persons. For ex:

input : person 1 - name : "John "

lastname : "Lewis"
age: 30

person 2- name: "Merry"
lastname:"sdfs"
age: 20

person 3- name : "Henry"
lastname : "sds"
age: 5

output : Henry sds
5 years old.

Hint: Instead of array of structure use,pointer to structure for this.