

CS19101 PDS laboratory

Assignment 6

Write programs for problems 1,2 and 3 in three different files named `A6_1_<machine number>_<Roll no.>.c`, `A6_2_<machine number>_<Roll no.>.c` and `A6_3_<machine number>_<Roll no.>.c` respectively (without the '<' and '>'). Put these three files into a compressed directory named `A6_<machine number>_<Roll no.>.zip` and submit it.

Example: If your roll number is 19DEP99999 and your machine number is 99, then the names of your files should be `A6_1_99_19DEP99999.c`, `A6_2_99_19DEP99999.c` and `A6_3_99_19DEP99999.c`.

This is an assignment on functions and one-dimensional arrays. Use of multi-dimensional arrays, pointers and global variables are not allowed.

1. Declare an array A of dimension 10×10 . Do not care to fill it; in this problem, the numbers in the array will not matter to us. We will rather be bothered about the address of various cells of it.

Write a function with the following prototype:

```
int* ADDR (int* p, int i, int j);
```

In main, take two integers i and j through the keyboard. Assume that i and j lie between 0 and 9 (both inclusive).

Call function ADDR with the following arguments: the first argument is the address of `A[0][0]`, the second and third arguments are i and j respectively. ADDR should return the address of `A[i][j]`, which you print in the main().

You are advised to check that what you print matches with `&A[i][j]`.

[10 marks.]

2. Declare two character arrays s1 and s2 of size 100. Fill each of them through keyboard. The two strings may have blank spaces. However, assume that the strings

do not have two successive blankspaces. Print the string obtained by interleaving s1 and s2 as shown below:

Sample input/output:

Enter s1: I study in IIT KGP

Enter s2: The sky is cloudy

I The study sky in is IIT cloudy KGP

[10 marks.]