

Assignment 6

Deadline: 18th Feb 2017

1. Yash is a school going kid who loves to solve word puzzles and play with scramble words. He performs a permutation of all the letters in a given word and constructs new words. But given his young age, he finds it difficult to memorize the obtained results for words with more than 5 letters. Design a program (filename: assign6a.c) using FUNCTIONS in C that takes letters as input and produces all the possible words from those letters, so that Yash can now have all the possible words that can be made from the given letters at his disposal.

Sample Input/output:*Input:*

Number of letters: 3

Enter the letters: a,c,t

Output:

The possible words are: act, atc, cat, cta, tac, tca

2. Mayank, the captain of IITP cricket team sat with his teammates before the finals to discuss strategies to win the Inter-IIT tournament. The main concern throughout the tournament has been the bowling department where although there are many bowlers in the team, the right combination of overs that needs to be distributed among these bowlers is yet to be obtained. Write a program in C (filename: assign6b.c) using FUNCTIONS which will take input as the number of bowlers and the maximum number of overs one can deliver along with the total number of overs, and produce all the unique combinations of overs among the bowlers. For example, 3 3 3 1 0 0 combination is considered same as 3 3 3 0 1 0. Hence these combinations are not unique. You can also write a function to check the uniqueness of the combination. Your program may solve the problem for Mayank and IITP may win the next match gloriously.

Sample input/output:*Input:*

Total overs: 10

Maximum number of overs for one bowler: 4

Number of bowlers: 4

Output:

4 4 2 0

4 4 1 1

4 3 3 0

4 3 2 1

4 2 2 2

3 3 3 1

3 3 2 2

Program Formatting Instruction: Students are advised to write their programs with proper care. A program must have a header block consisting of programmer's name and rollno, along with date of creation. In the header, also include the objective of the program in one line. The program should be properly indented and it is expected that you will use meaningful variable names. For each functional block provide a short and relevant comment.

Submission Process: Submit your assignment (make sure your assignment can be executed in using gcc compiler) using the link- <http://172.16.1.3/~samrat/CS112/submission/> Login using your rollno (ex: 1601CS01) and password. Once you login, change the password immediately. It is your responsibility to set a strong password that is not guessable by others. Upload the assignments using the specified filenames only. After the due date (mentioned at top), the uploading of files may be allowed for few more time but it will be treated as late submission. So ensure that you submit the assignment on time. There will be penalty if you are found to take any unfair means during the lab hours and during the assignment submission process. **Copying program from any other source and allowing others to copy your program, both will be penalized equally.**