

CHALLENGE # 2

INSTRUCTIONS

Read Carefully

1. All of the following tasks are taken from websites or apps. So, you can easily find their solutions online. The intention of telling this to you is that I have taken this initiative so that you can learn programming, if you are going to copy solutions from web and submit them to me, then purpose of these challenges will all go in vain. So, don't copy paste solutions from web. If you aren't able to solve some of them (after trying your level best), submit your completed tasks or uncompleted tasks if they are not working properly on particular inputs. You will surely learn a lot when you will go through their solutions that I will share after the deadline.
2. Submit your solutions at muhammadaizazahmad0@gmail.com. Use ONLY your Official PUCIT email address for submission. The submissions will only include files with .c / .cpp extensions. The names of the files will be after the name of each Task. For Example, for TASK 1 the name of the file would be TASK 1.c or TASK 1.cpp
3. If you have confusions regarding any task you can ask me about it in comment section of Facebook post or by writing email to the above-mentioned email address.
4. The winner of the competition will be selected on the basis of number of tasks completed, readability of code, best logic etc. Surely you will not receive any reward or prize money on winning the competition. So, just try to learn from it.
5. Try to write code firstly on paper and then write them on compiler.
6. If you get stuck with some syntax error, try to find its solution on google. (Remember, being good at googling is one of the major skills for programmers).
7. Try to debug your program in case you aren't not getting required output or in case of runtime error. To be a good programmer you should also be a good at debugging.
8. Try to make functions. This will reduce your number of lines of codes
9. **Submit your tasks before Saturday 13th June,2020.**

10.SHARE THIS DOCUMENT WITH YOUR FRIENDS.

SNAKE AND LADDER

Snake and Ladder is a board-based game. That Consist of 50-100 squares. The squares are full of Tricks and traps. You roll the dice and move forward on the board based on your luck. If you get the ladder you will move upward on the board. If you get the snake you will be moved Downward. In this challenge you will implement Simple Snake and ladder game without graphical user interface based on the following rules.

- This Snake and ladder game will consist of 50 squares. You can use 50 sized string or char (based on your logic) array to make a board like that.

50	49	48	47	46
41	42	43	44	45
40	39	38	37	36
31	32	33	34	35
Ladder	29	28	27	26
21	22	23	24	25
20	Snake	18	17	16
11	12	13	14	15
10	9	8	7	6
X and 0	2	3	4	Ladder

- As you can see in the above-board Certain Squares are marked as “Ladder” or “Snake”.

- You will use rand() function to generate random numbers from 1 to 6, as a simulation to die roll. The initial position of the token (goti) of each player is 1(As at position 1 "X and O" is written). The token (goti) will move forward according to the die number a user get.
- Ladder Number 1 starts at position 5 (In the first Line where "Ladder" is written). If a users get the die number and manages to go a position 5 ("Position of first ladder") then his token will be moved to position 17 (as a simulation of ladder, as in board-based game). Similarly Ladder Number 2 is at position 30. If user manages to get at position 30 token will be moved to position 46.
- Snake Number 1 has its face at Position 19, which means that if token of the user gets at position 19, the token will be moved to the tail of Snake which is position 3. Similarly Snake number 2 has its face at position 48, and the token will be moved to tail of snake number 2 which is at position 27. The further gameplay will continue like above steps.
- If a token is moved to the position where token of other user is also present then the already present token will be moved to position 1 (starting point of the board).
- Token cannot move forward, if moving the token will result in token going out of range of 50. For Example, if token is at position 47 and die number is 4 then you will display Error "You cannot move forward". And will change the turn.
- The user whose token will first reach the position 50 will win the game. After Game is finished Print Appropriate Winning Message and terminate the program.
- At start of game, Display the rules of the game to the user as shown below.

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RULES :
1)The Face of Snake 1st is at 19 and its tail at 3
2)The Face of Snake 2nd is at 48 and its tail at 27
3)Ladder 1 starts at 5 and ends at 17
4)Ladder 2 starts at 30 and ends at 46
5)Both players will start their gameplay from number 1
6) If one player comes at same position where other player was already
present than the already present player has to start game from number 1

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- Use system("cls") to clear the screen after each turn.

Sample Gameplay

50	49	48	47	46
41	42	43	44	45
40	39	38	37	36
31	32	33	34	35
Ladder	29	28	27	26
21	22	23	24	25
20	Snake	18	17	16
11	12	13	14	15
10	9	8	7	6
X and O	2	3	4	Ladder
PLAYER X : Press any key to roll the DIE				

X HAS ROLLED THE DIE AND THE NUMBER IS 4
WOW!! YOU FOUND THE LADDER!!

50	49	48	47	46
41	42	43	44	45
40	39	38	37	36
31	32	33	34	35
Ladder	29	28	27	26
21	22	23	24	25
20	Snake	18	XXXX	16
11	12	13	14	15
10	9	8	7	6
1	2	3	4	Ladder

O HAS ROLLED THE DIE AND THE NUMBER IS 4
WOW!! YOU FOUND THE LADDER!!

You have striked Player X,Player X will start from 1

50	49	48	47	46
41	42	43	44	45
40	39	38	37	36
31	32	33	34	35
Ladder	29	28	27	26
21	22	23	24	25
20	Snake	18	0000	16
11	12	13	14	15
10	9	8	7	6
XXXX	2	3	4	Ladder

X HAS ROLLED THE DIE AND THE NUMBER IS 6
Ouch!! You have been bitten by Snake!!

50	49	48	47	46
41	42	0000	44	45
40	39	38	37	36
31	32	33	34	35
Ladder	29	28	27	26
21	22	23	24	25
20	Snake	18	17	16
11	12	13	14	15
10	9	8	7	6
1	2	XXXX	4	Ladder

O HAS ROLLED THE DIE AND THE NUMBER IS 5
You can't move forward!!

50	0000	48	47	46
41	42	43	44	45
40	39	38	37	36
31	32	33	34	35
Ladder	29	28	27	26
21	22	23	24	25
20	Snake	18	17	16
11	12	13	14	15
10	9	8	XXXX	6
1	2	3	4	Ladder

PLAYER: You Press any key to go to 11 the DIE

0 HAS ROLLED THE DIE AND THE NUMBER IS 1

0000	49	48	47	46
41	42	43	44	45
40	39	38	37	36
31	32	33	34	35
Ladder	29	28	27	26
21	22	23	24	25
20	Snake	18	17	16
11	12	13	14	15
10	9	8	7	6
1	2	XXXX	4	Ladder

PLAYER 0 HAS WON!!Press any key to continue . . .