

Lab 03 OOP – BSDS

Note 1: Do your own work, talking, sharing, discussion is considered as cheating (in any case and strictly discouraged), therefore be careful. TA's will be there for your help. Wait for TA, if you have any query

Note 2: Do your best effort, partial marks will be given for your attempt

Task 1: Write a program to simulate the inning of a 10 balls (balls not overs) match with five player team. Each ball can be:

- simple (no wide, not no ball), where batsman can be out, or can get 0 to 6 scores
- wide, on which players can take runs, as well as a boundary can be in result. In any case **1 extra score** will be given to batting team and a maximum of **5 runs** can be scored and ball will be **delivered again**
- no ball, batsman can only get run out. Batsman can get 0 to 6 scores, where **2 extra score** will be given to batting team and a **maximum of 8 runs** can be scored and ball will be **delivered again**
- On any type of ball batsman can be run out

For each ball in single line show following information:

- Status of ball: (-) hyphen for normal ball, (W) for wide ball, (N) for no ball
- Score on each ball: (.) dot for zero score or 1-6
- Status of batsman: (-) hyphen for not out, B for bowled out, C for catch out, R for run out, S for stump

At the end display total score and total wickets. In case **4** players are out, inning will be finished

Help/ Explanation: You may generate a random number to decide, ball is simple, wide or no. In case of wide ball, player can be run out (which you can decide by another random number). Similarly, score on wide ball can be another random number to get score 1-4 runs (where 1 will be added as penalty of wide ball). In case of no ball, the difference from wide ball is that player may score 0-6 runs (where 2 will be added as penalty). In both cases, ball will be delivered again. Lastly, you may generate another random number to decide out or not out. Player can be out on any type of ball. Therefore, in case of wide & no ball only run out is possible, where in case of simple ball player can be bowl, catch, run or stump. In case of bowl, catch or stump there will be no score. Therefore, apply checks carefully.

Sample Run: (on right side, explanation is given for your understanding only)

-	4		Simple ball, four runs score
-	2	R	Simple ball, run out on third score
-	1		
	1		Wide ball, only penalty of 1 score
-	.	B	Batsman is bowled out
-	4		
-	.	C	Simple ball, catch out
N	3	R	No ball, run out on second score. One score taken and two added for no ball
Total Score: 15 Total Wickets: 4 Extras: 3			

Task 2: A friend of yours have a garment shop. There are twenty leftover items in the shop available on very cheap price. You may pick anything, if it suits you. There are trousers, shirts, dress shirts, dress pants. Shirts can be full sleeves and half sleeves. All of them are available in two major categories. Adults and Kids. In kids, there are small, medium and large size. In adults there are large and extra-large size. In adults, each item is in either blue or black color. In kids, each item is in three colors: blue, green and yellow. Your choices are as follows:

- adult's dress pant in large blue color full sleeves
- adult's shirt in black color half sleeves
- kid's trouser in blue color medium size
- kid's dress shirt in green color medium size in half sleeves
- kid's shirt in yellow color large size in full sleeves

Generate twenty item at random and put a * in front, if any item is according to your requirement. At the end show how many items in total, you have purchased.

END OF LAB (Best of Luck)
