

Lab 07 (Dated: 19-11-2021)
OOP – BCS

Create class Player with data members:

- no of matches
 - dynamic array to store score of each match
 - dynamic array to store 'N' (not out) or 'O' (out) against each match
1. Implement following member functions: [Avoid duplication to secure full marks]
- Constructor with parameter no of matches, declare arrays accordingly and initialize both score (in range 0-150) and out / not out randomly
 - Copy constructor to create a new copy of existing object
 - Assignment operator to create a copy of existing object in another existing object
 - Destructor to de allocate memory
 - Function to get average of player. For average add scores in all matches, count number of times player got out and divide total score to get average
 - Overload stream operator to show output in format given in box:

No of Matches: 4		Average: 56	
Match: 1	2	3	4
Score: 9	23	34	102
Status: Out	Out	Out	Not Out

Write appropriate main function to test member functions.

2. Overload following operators: [Avoid duplication to secure full marks]
- ++ (Implement both Pre & Post operator) Increment number of matches by 1, assign score and out/ not out randomly
 - += with second parameter an integer (score), increment number of matches by 1, assign score with parameter value (if in range, otherwise assign random value in range), assign out/ not out randomly
 - == return 1, if both players have equal average, otherwise return 0
 - > return 1, if player 1 has better average than player 2, otherwise return 0
3. Modify class Player add static member to store number of players, and constant data member to store year of birth (only) and modify following member functions:
- Parameterized constructor to pass another data member that is year of birth. Assign year of birth to data member between constructor signatures and body of the function. Inside add 1 to static member number of players
 - Modify copy constructor to store date of year, also add 1 to static member number of players
 - Similarly modify destructor to deduct 1 from number of players
 - Modify stream operator to print age of player in years. To calculate age, subtract year from 2021, see output format given in box

Age: 21 years			
No of Matches: 4		Average: 56	
Match: 1	2	3	4
Score: 9	23	34	102
Status: Out	Out	Out	Not Out

END OF LAB (Best of Luck)
