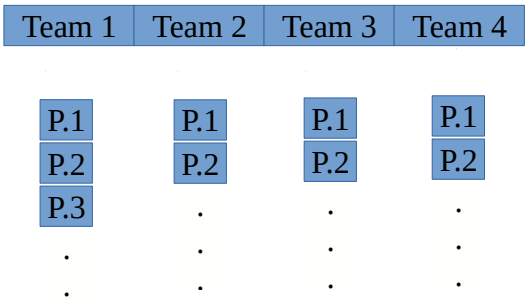
ITU Computer Engineering Department
BLG 223E Data Structures, Fall 2021-2022
Recitation #1

In this recitation, you are asked to write a C++ program that finds the best forward player among players in a list of football teams of last year tournament. There will be several teams and each team will have several forward players. The goal of this recitation is to implement re-sizable dynamic arrays.

You are expected to fill the some methods in the team.cpp file and main.cpp file. The program should run properly using methods you filled. The main method should be able to add player objects to the array of players on each team object of the team array and add new team objects to the team array.

If a new player is wanted to be added, and the related array size is exceeded, then its size has to be increased. If the current size is 0 then it should be increased by 3 otherwise it should be doubled.

The desired team-player structure is as follows:



The score evaluation to find the best player can be calculated as Eq 1. (#: total number)

$$score = \frac{\#\_of\_goals}{\#\_of\_matches\_played} * 3 + \frac{\#\_of\_assists}{\#\_of\_matches\_played} * 1 + (45 - age)$$

Given: All header and .cpp files with some methods left blank.
Asked: Fill addplayer() and addTeam() methods in these team.cpp and main.cpp files.

addPlayer(): Adds a new player to the desired team. Prevent adding new player with number that already exist in the team.
addTeam(): Adds a new team to team array.

Complete and submit: Complete methods and Submit main.cpp and team.cpp files.

Due time to submit: 13.09.2021 23:59 over ninova

Submission Rules
If explanations for this homework is not clear, you can ask your question on the message board for BLG 223E on NINOVA. Please check before writing your question whether your question is asked by someone else.

Make sure you write your name and number in all of the files of your project, in the following format: Make sure you write your name and number in all of the files of your project, in the following format:

/ @Author*
Student Name: <student_name>
Student ID : <student_id>
*Date: <date> */*

- Only electronic submissions through Ninova will be accepted no later than deadline.
- You may discuss the problems at an abstract level with your classmates, but you should not share or copy code from your classmates or from the Internet. You should submit your own, individual homework.
- Academic dishonesty, including cheating, plagiarism, and direct copying, is unacceptable.
- Use comments wherever necessary in your code to explain what you did.
- Note that **YOUR CODE WILL BE CHECKED WITH THE PLAGIARISM TOOLS!**