National University of Computer and Emerging Sciences



Lab Exercise 04

For

Object Oriented Programming Lab

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| Course Instructor(s) | Dr. Danish |
| Lab Instructor(s) | Mr. Mughees Ismail |
| Semester | Spring 2020 |

**FAST School of Computing**

# Instructions:

1. Make a word document with the naming convention “SECTION\_ LAB#\_ROLLNO” and put all your source code and snapshots of its output in it. Make sure your word file is formatted properly.
2. Plagiarism is strictly prohibited.
3. Do not discuss solutions with one another.

# Useful links

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| **Question#1** |

Create a student database of Students using a structs. Your program will have two structures One for sections and One for Students. A student will have the following attributes:

1. Name
2. CNIC
3. Gender
4. CGPA

And the struct section will the following attributes:

1. An array of students less than 40.
2. Section name
3. Class teacher.

You have to write an efficient program to create sections of the amount user wants to, with less than 40 students. If the array of students is full, offer the student another section. Student can update their attributes.

Display the students of the whole section on request.

Sort the students wrt their CGPA. Write a menu driven program to complete all the required functionalities.

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| **Question#2** |

Write a program having 3 structures, circle, triangle and rectangle. Identify their attributes and find their areas. Provide functions for performing all the tasks.

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| **Question#3** |

Create a struct item, there can be three items:

1. Drinks for 60 rs.
2. Burgers for 200 rs.
3. Sweet for 120 rs.

A user can come and buy the required item, he can make his own combos. Either a burger with a drink or a burger with a sweet. User can buy as many items as he wants.

Calculate their bills and display the receipts at the end.