

**CS 202 : IT Workshop I**  
**Assignment 8**  
**Total Marks =10**

Q1.

**Class Student**

```
- name: String
- rollNo: int
- cgpa: double
- facultyAdvisor: Faculty
- branch: String
- collegeID: String
```

```
<<constructor>>Student()
<<constructor>>Student(Faculty)
<<constructor>>Student(Student)
+ updateStudentRecord() : void
+ getStudentDetails() : void
+ getAdvisor() : Faculty
```

**Class Faculty**

```
- name : String
- empID: int
<<constructor>>Faculty()
+ toString() : String
```

Consider two classes **Student** and **Faculty** as detailed above. Each student has a faculty advisor. toString() function in the Faculty class returns a string that contains faculty name and empID.

i) Create a student object in the driver class (containing the main() method) and then create a shallow copy of that student object. Demonstrate it by showing that if you change any field in the Faculty object which is a part of the Student object, the shallow copied Student object gets affected, meaning the faculty advisor fields of the shallow copied student object also changes.

ii) ) Create a student object in the driver class (containing the main() method) and create a deep copy of the student object. Demonstrate it by showing that if you change any field in the Faculty object which is a part of the Student object, the deep copied Student object does not get affected, meaning the faculty advisor fields of the deep copied student object does not change.

Note : Use the copy constructor in the student class to create shallow copy and deep copy of the objects. Hence, you need to write two different codes for shallow copy and deep copy.