# Assignment 5

Q1. Write a menu driven program for Student management. In main(), create Array of Objects and provide facility for accept, print, search and sort.
For student accept name, gender, rollNumber and marks of three subjects from user and print name, rollNumber, gender and percentage.
Provide global functions void sortRecords(Studuent[] arr) and int searchRecords(Student[] arr) for sorting and searching array. Search function returns index of found Student, otherwise returns -1.

Q2. Write a user defined function factorial() that calculates factorial of given number and it throws exception if number entered by user is negative.

Q3. Create a user defined class "Fraction" with data members numerator and denominator. Provide constructors, getter/setters and methods like lowestForm() and decimalValue(). The setDenominator() method should throw exception if value is zero. Overload operators +, -, *, /, =, ==, !=, <, >.

Q4. Write a class Address. Implement constructors, getters, setters, accept(), and display() methods.

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│      C    address               │
├─────────────────────────────────┤
│ □ building: char[30]            │
│ □ street: char[30]              │
│ □ city: char[20]                │
│ □ pin: int                      │
├─────────────────────────────────┤
│ ● address()                     │
│ ● address(char*,char*,char*,int)│
│ ● accept():void                 │
│ ● display():void                │
│ ● get_building(): char*         │
│ ● get_street(): char*           │
│ ● get_city(): char*             │
│ ● get_pin(): int                │
│ ● set_building(char*): void     │
│ ● set_street(char*): void       │
│ ● set_city(char*): void         │
│ ● set_pin(int): void            │
└─────────────────────────────────┘
```