

Student Management System – Pseudocode

MODULE 1: Student Class

```
CLASS Student
PRIVATE:
rollNumber
name
course
marks

PUBLIC:
FUNCTION setData()
INPUT rollNumber, name, course, marks
END FUNCTION

FUNCTION displayData()
PRINT rollNumber, name, course, marks
END FUNCTION

FUNCTION getRollNumber()
RETURN rollNumber
END FUNCTION

FUNCTION updateData()
INPUT new name, course, marks
END FUNCTION
END CLASS
```

MODULE 2: File Handling

```
FUNCTION loadFromFile(studentArray, count)
OPEN file in read mode
WHILE file has data
READ student data into array
INCREMENT count
END WHILE
CLOSE file
END FUNCTION

FUNCTION saveToFile(studentArray, count)
OPEN file in write mode
FOR each student
WRITE student data to file
END FOR
CLOSE file
END FUNCTION
```

MODULE 3: Menu Operations

```
FUNCTION showMenu()
DISPLAY menu options
END FUNCTION

FUNCTION addStudent()
CALL setData()
INCREMENT count
END FUNCTION

FUNCTION displayStudents()
```

```
FOR each student
    CALL displayData()
END FOR
END FUNCTION

FUNCTION searchStudent(roll)
    FOR each student
        IF roll matches
            DISPLAY student
        END IF
    END FOR
END FUNCTION

FUNCTION updateStudent(roll)
    SEARCH student by roll
    UPDATE student details
END FUNCTION
```

```
FUNCTION deleteStudent(roll)
    SEARCH student by roll
    SHIFT remaining records
    DECREMENT count
END FUNCTION
```

Main Program Flow

```
START
    LOAD data from file
REPEAT
    SHOW menu
    PERFORM selected operation
UNTIL user exits
    SAVE data to file
END
```