**ADDIS ABABA SCIENCE & TECHNOLOGY UNIVERSITY SCHOOL OF ENGIENERING**



**College of Electrical and mechanical engineering**

Course Title fundamental programming

Section B

Department Software Engineering

**Group assignment**

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Here is the pseudocode for the problem;

Step 1: START

Step 2: Accept number of student and subject  
Step3:  Create a Student array  
    int id;  
    string name;  
    float mark[5];  
Step 4: Accept student mark for each subject and student  
Step 5: Create a Grade array   
    string gradeLetter;  
    float gradePoint;  
 // Initialize grade scale  
    {"A", 34.0}, {"B+", 3.5}, {"B", 3.0},  {"C+", 2.5}, {"C", 2.0}, {"D", 1.5}, {"F", 0.0}  
Step 6: Create a function to calculate grade letter  
    // calculate grade based on marks and grade scale  
    // return grade object  
Step 7: Create a function to calculate CGPA  
    // calculate CGPA based on student's marks  
    // return CGPA  
Step 8: Create a function to print mark sheet  
 // print the student's mark sheet  
 //print each row of the table in ascending order of student IDs  
  //print the lower borders of the table  
Step 9: Create a function to search for a specific student  
    // search for student based on ID or name  
Step 10: Create a function to find top 5 ranked students  
   // sort students based on CGPA  
 //print upper borders and titles of the table  
 // return top 5 students  
 //print the lower borders of the table  
    // present options to user and take input  
    // call corresponding functions based on user choice

Step 11: END