

Assignment on Array

Problem 1: File Read and Write - Student Records

Awesh is managing student records and needs a way to store and retrieve student information from files. You are tasked with creating a program that reads student names and scores from an input file and writes the highest score to an output file.

Problem Statement

Write a program that reads student names and their scores from `students.txt`, where each line contains a name and a score separated by a space. Then, write the name and score of the student with the highest score to `highest_score.txt`.

`Students.txt` contains:

3

Alice 90

Bob 75

Charlie 85

`highest_score.txt` contains:

Alice 90

Problem 2: Ternary Operator - Age Classification

Awesh is creating a simple age classification tool. He needs to classify a person into different age groups based on their age using the ternary operator.

Problem Statement

Write a program that takes an age as input and classifies the person into one of the following age groups using the ternary operator: `Child` (`age < 13`), `Teenager` (`13 <= age < 20`), `Adult` (`20 <= age < 60`), and `Senior` (`age >= 60`).



Input	Output
10	Child
16	Teenager
25	Adult
80	Senior

Problem 3: Macro - Maximum of Two Numbers

Awesh is writing a utility to find the maximum of two numbers. He wants to use macros to accomplish this task.

Problem Statement

Write a program that defines a macro to find the maximum of two numbers. Use this macro to determine and print the maximum of two user-provided integers.

Input	Output
4 5	5
-10 -15	-10
0 1	1
1 1	1

Problem 4: Switch-Case - Grade Converter

Awesh is designing a grading system for his project. He needs to convert numerical grades into letter grades based on standard grading scales. You need to help Awesh by writing a program that uses a switch case to convert a numerical grade (from 0 to 100) into a corresponding letter grade.

Write a program that takes a numerical grade (0-100) as input and prints the corresponding letter grade based on the following scale:

- A for grades 90 and above
- B for grades 80-89
- C for grades 70-79
- D for grades 60-69
- F for grades below 60

Use a switch case to handle the different ranges of grades and print the appropriate letter grade.

Input	Output
92	A
85	B
72	C
44	F