Grade Manager

Student Grade Manager

The Student Grade Manager is a Java-based console program designed to help students enter, store, and analyze their course marks. The program allows users to input multiple grades, validates the data, calculates the average, highest mark, lowest mark, and assigns a letter grade based on the final average. The software is intended to be easy to use, reliable, and accurate, making it useful for students who want to track their academic performance. This project demonstrates skills in user input, data validation, processing calculations, conditional logic, loops, and structured program design.

GANTT Chart

GANTT Chart (Planning + Implementation)

Planning Stage: 3 Days
Implementation Stage: 2 Days (as required)

Task	Description	Day 1	Day 2	Day 3	Day 4	Day 5
Project Selection	Choose project idea	🟨				
Requirements Analysis	Define inputs, outputs, rules	🟨				
Structure Chart	Design program structure		🟨			
Flowcharts	Create 2 subroutine flowcharts		🟨			
Test Plan	Develop test cases			🟨		
Coding	Implement Java program				🟨	🟨
Testing	Run test plan & fix errors					
Final Review	Prepare for submission					

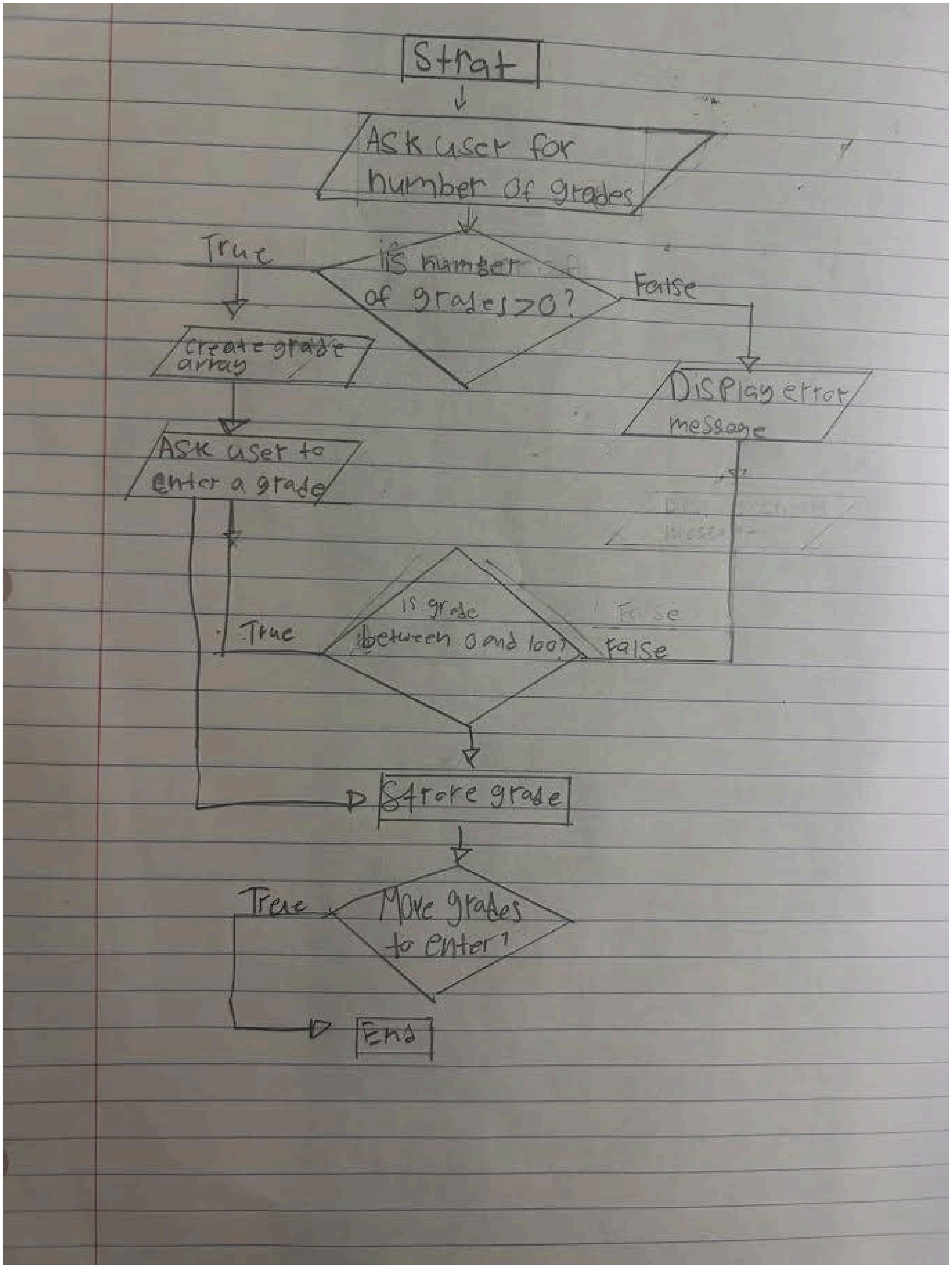
IPO Chart

IPO Chart

https://www.canva.com/design/DAG-IS_t3Gg/KZQLck0UaD9qT-X-SnoH4w/edit?ui=eyJBIjp7fX0

https://docs.google.com/drawings/d/1Up8G9-t2e5uWMGiLuxxZveZbVU3eoo5UWad69L5dfDw/edit

FlowChart 1



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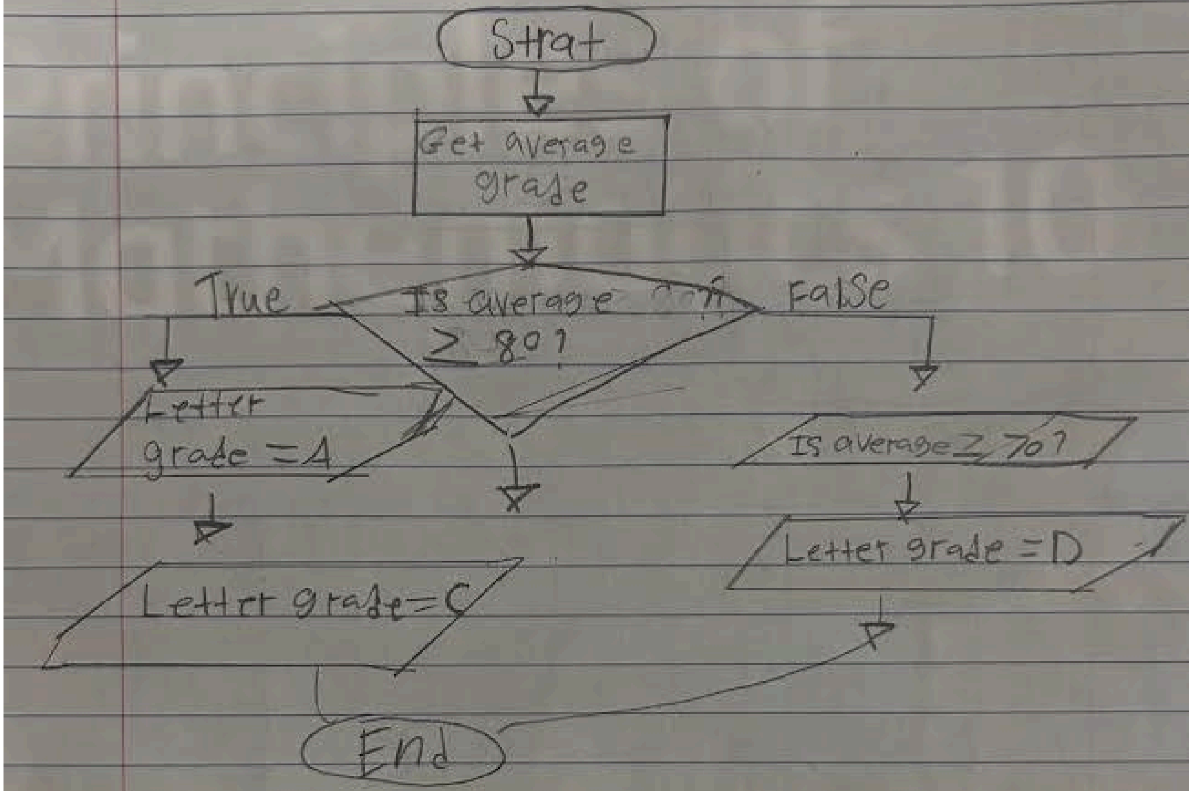
FlowChart 2

https://docs.google.com/drawings/d/1FopGDM5r9b-RpNyIdGoQRnyEMlnW7kB1ktY8r1xPBjk/edit


Strat
Get average grade
True
Is average ≥ 80?
False
Letter grade = A
Is average ≥ 70?
Letter grade = D
Letter grade = C
End

Test Plan

---------TEST LOG---------

Validating Data Software

Date of Software Test: ________________

Name of Software Tester: _____________

Feature 1 **<Type description of program feature here>**			
TEST CASES **(student 1)**	**EXPECTED OUTPUT** **(student 1)**	**GENERATED OUTPUT** **(student 2)**	**REQUIRED FIXES MADE** **(student 2)**
Grades: 80, 90, 100	Avg = 90		
Grade = -5	Error message		
Grade = 150	Error message		
Grades: 50, 60, 70	Avg = 60		
Avg	Letter Grade = A		
Grade = abc	Error message		
Grades: 0, 100	Avg = 50		

<table>
<tr><td colspan="4">Feature 2
<Type description of test feature here&gt;</td></tr>
<tr><td>TEST CASES
(student 1)</td><td>EXPECTED OUTPUT
(student 1)</td><td>GENERATED OUTPUT
(student 2)</td><td>REQUIRED FIXES MADE
(student 2)</td></tr>
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---------TEST LOG---------

Validating Data Software