

Project Report: Student Classification Based on Scores

1. Introduction

This program classifies students into four categories based on their scores: **Dedication**, **Clever**, **Wise**, and **Trustworthy**. It handles user input and checks for errors.

2. Problem Analysis

The program takes a score and classifies the student:

- **0-40**: Dedication
- **41-60**: Clever
- **61-80**: Wise
- **81-100**: Trustworthy

Handles invalid input or scores out of range.

3. Design

- Take input for score
- Classify score into a category
- Handle errors for invalid input or out-of-range values

4. Pseudo Code

```
START
    TRY
        RECEIVE score
        IF score <= 40: PRINT "Dedication"
        IF 41 <= score <= 60: PRINT "Clever"
        IF 61 <= score <= 80: PRINT "Wise"
        IF 81 <= score <= 100: PRINT "Trustworthy"
        IF score < 0 or score > 100: PRINT "Invalid score"
    CATCH ERROR: PRINT "Invalid input"
END
```

5. Code Implementation

```
def getClass():
    try:
        score = int(input("Enter your score: "))
```

```
if 0 <= score <= 40:
    print("Your class is 'dedication'")
elif 41 <= score <= 60:
    print("Your class is 'clever'")
elif 61 <= score <= 80:
    print("Your class is 'wise'")
elif 81 <= score <= 100:
    print("Your class is 'trustworthy'")
else:
    print("Invalid score")
except ValueError:
    print("Invalid input")
```

```
getClass()
```

6. Testing and Debugging

1. **Input:** 50 → **Output:** "Clever"
 2. **Input:** "abc" → **Output:** "Invalid input"
 3. **Input:** 120 → **Output:** "Invalid score"
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7. Report & Documentation

- **Purpose:** The program classifies students based on their scores, using basic Python constructs such as conditionals and error handling. It helps in categorizing students as **dedication**, **clever**, **wise**, or **trustworthy** based on their input score.
- **Error Handling:** The `try-except` block ensures that invalid inputs (e.g., non-numeric values) are caught and a user-friendly message is shown. This prevents program crashes due to invalid inputs.