

1. Grade Checker

Code:

```
score = int(input("Enter your score: "))

if score >= 90:
    print("Grade: A")
elif score >= 80:
    print("Grade: B")
elif score >= 70:
    print("Grade: C")
elif score >= 60:
    print("Grade: D")
else:
    print("Grade: F")

# This program takes a numerical score as input and outputs the
corresponding letter grade.
```

Explanation

This program takes the student's score as input and checks it using **if-elif-else** conditions:

```
If score ≥ 90 → Grade A
If score ≥ 80 → Grade B
If score ≥ 70 → Grade C
```

```
If score ≥ 60 → Grade D  
Otherwise → Grade F
```

Output:

A screenshot of the Visual Studio Code interface. The top part shows a code editor with a Python script named 'grades.py'. The script contains a series of nested if statements to determine a grade based on a score. A comment at the bottom indicates the program takes a numerical score as input and outputs the corresponding letter grade. The bottom part of the screenshot shows the terminal tab, which displays the execution of the script and its output. The terminal shows the user entering a score of 86, which results in the output 'Grade: B'. Another run with a score of 57 results in 'Grade: F'. The terminal also shows the command used to run the script: 'python grades.py'.

```
grades.py  
1 score = int(input("Enter your score: "))  
2  
3 if score >= 90:  
4     print("Grade: A")  
5 elif score >= 80:  
6     print("Grade: B")  
7 elif score >= 70:  
8     print("Grade: C")  
9 elif score >= 60:  
10    print("Grade: D")  
11 else:  
12     print("Grade: F")  
13 # This program takes a numerical score as input and outputs the corresponding letter grade.  
  
OUTPUT DEBUG CONSOLE TERMINAL PORTS PROBLEMS  
PS C:\Users\saiku\OneDrive\Desktop\python> c:; cd 'c:\Users\saiku\OneDrive\Desktop\python'; & 'c:\Users\saiku\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\saiku\.vscode\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundled\libs\debugpy\launcher' '65108' '--' 'c:\Users\saiku\OneDrive\Desktop\python\grades.py'  
Enter your score: 86  
Grade: B  
PS C:\Users\saiku\OneDrive\Desktop\python> c:; cd 'c:\Users\saiku\OneDrive\Desktop\python'; & 'c:\Users\saiku\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\saiku\.vscode\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundled\libs\debugpy\launcher' '65127' '--' 'c:\Users\saiku\OneDrive\Desktop\python\grades.py'  
Enter your score: 57  
Grade: F  
PS C:\Users\saiku\OneDrive\Desktop\python>
```

2 Student Grades

```
students = {}  
  
while True:  
  
    print("\n1. Add Student")  
  
    print("2. Update Student Grade")  
  
    print("3. Display All Students")  
  
    print("4. Exit")
```

```
choice = input("Enter your choice: ")

if choice == "1":

    name = input("Enter student name: ")

    grade = input("Enter grade: ")

    students[name] = grade

    print("Student added successfully!")

elif choice == "2":

    name = input("Enter student name to update: ")

    if name in students:

        grade = input("Enter new grade: ")

        students[name] = grade

        print("Grade updated successfully!")

    else:

        print("Student not found!")

elif choice == "3":

    print("\nStudent Grades:")

    for name, grade in students.items():

        print(name, ":", grade)

elif choice == "4":

    break
```

```
else:  
    print("Invalid choice!")
```

Explanation:

This program uses a dictionary to store student names and grades.

Functions:

Add a student

Update student grade

Display all students

Exit program

It uses:

dictionary

if-else

while loop

Output:

```
1. Add Student  
2. Update Student Grade  
3. Display All Students  
4. Exit
```

Enter your choice: 1

Enter student name: santosh

Enter grade: 8.6

Student added successfully!

```
1. Add Student  
2. Update Student Grade  
3. Display All Students  
4. Exit
```

Enter your choice: 1

Enter student name: surya

Enter grade: 7.6

Student added successfully!

```
1. Add Student  
2. Update Student Grade  
3. Display All Students  
4. Exit
```

```
Enter your choice: 2

Enter student name to update: surya

Enter new grade: 9.3

Grade updated successfully!

1. Add Student

2. Update Student Grade

3. Display All Students

4. Exit

Enter your choice: 3

Student Grades:

santosh : 8.6

surya : 9.3

1. Add Student

2. Update Student Grade

3. Display All Students

4. Exit
```

3. Write a File:

Code

```
file = open("sample.txt", "w")

file.write("This is a sample file.\n")

file.write("This file is created by me")

file.close()

print("File written successfully.")
```

Output:

The screenshot shows the VS Code interface. The left pane displays the code for 'grades.py':

```
grades.py > ...
● 1  file = open("sample.txt", "w")
  2  file.write("This is a sample file.\n")
  3  file.write("This file is created by me")
  4  file.close()
  5  print("File written successfully.")
```

The right pane shows the terminal output:

```
PS C:\Users\saiku\OneDrive\Desktop\pytho> c:; cd 'c:\Users\saiku\OneDrive\Desktop\pytho'; & 'c:\Users\saiku\on310\python.exe' 'c:\Users\saiku\.vscode\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundled\libs\debugps\saiku\OneDrive\Desktop\pytho\grades.py'
File written successfully.
○ PS C:\Users\saiku\OneDrive\Desktop\pytho>
```

Explanation:

This program:

- . Opens a file in write mode
- . Writes Text into it
- . Saves and closes the file

4 Read From A File

Code:

```
file = open("sample.txt", "r")
content = file.read()
print("File Content")
print(content)
file.close()
```

Explanation:

This program:

- .Opens a file in read mode
- .Reads the contents using read()
- .Prints it on the screen

Output:

```
PS C:\Users\saiku\OneDrive\Desktop\pytho> c;; cd 'c:\Users\saiku\OneDrive\Desktop\pytho'; & 'c:\Users\saiku\AppData\Local\Programs\Python\Python310\python.exe' 'c:\Users\saiku\vscode\extensions\ms-python.python-2025.18.0-win32-x64\bundled\libs\debugpy\launcher' '64056' '--' 'C:\Users\saiku\OneDrive\Desktop\pytho\grades.py'
File Content
This is a sample file.
This file is created by me
PS C:\Users\saiku\OneDrive\Desktop\pytho>
```