# Python Programs with Explanation

## 1. Grade Checker

This program takes a score as input and prints the grade based on the following criteria:  
90+ : 'A'  
80-89 : 'B'  
70-79 : 'C'  
60-69 : 'D'  
Below 60 : 'F'

### Code:

# Grade Checker  
  
# Take score input from user  
score = int(input("Enter your score: "))  
  
# Determine the grade  
if score >= 90:  
 grade = "A"  
elif score >= 80:  
 grade = "B"  
elif score >= 70:  
 grade = "C"  
elif score >= 60:  
 grade = "D"  
else:  
 grade = "F"  
  
# Output the result  
print(f"Your grade is: {grade}")

## 2. Student Grades Dictionary

This program uses a dictionary to store student names and their grades. It allows users to add new students, update grades, and print all student grades.

### Code:

# Student Grades Manager  
  
student\_grades = {}  
  
while True:  
 print("\nChoose an option:")  
 print("1. Add new student and grade")  
 print("2. Update existing student's grade")  
 print("3. Print all student grades")  
 print("4. Exit")  
  
 choice = input("Enter your choice (1-4): ")  
  
 if choice == "1":  
 name = input("Enter student name: ")  
 if name in student\_grades:  
 print(f"{name} already exists. Use option 2 to update grade.")  
 else:  
 grade = input(f"Enter grade for {name}: ")  
 student\_grades[name] = grade  
 print(f"Added {name} with grade {grade}.")  
  
 elif choice == "2":  
 name = input("Enter student name to update: ")  
 if name in student\_grades:  
 grade = input(f"Enter new grade for {name}: ")  
 student\_grades[name] = grade  
 print(f"Updated {name}'s grade to {grade}.")  
 else:  
 print(f"{name} not found in records.")  
  
 elif choice == "3":  
 if student\_grades:  
 print("\nAll Student Grades:")  
 for name, grade in student\_grades.items():  
 print(f"{name}: {grade}")  
 else:  
 print("No student records found.")  
  
 elif choice == "4":  
 print("Exiting program.")  
 break  
  
 else:  
 print("Invalid choice. Please enter 1-4.")

## 3. Write to a File

This program demonstrates how to create a text file and write content to it using `open()` and `write()` functions.

### Code:

# Program to create a text file and write content to it  
  
# Open the file in write mode ('w')  
file = open("my\_file.txt", "w")  
  
# Write content to the file  
file.write("This is the first line of the file.\n")  
file.write("Python makes file handling easy!\n")  
file.write("This file was created using open() and write().\n")  
  
# Always close the file after writing  
file.close()  
  
print("Content has been written to 'my\_file.txt'.")