1.#include <iostream>

#include <string>

using namespace std;

int main() {

int age, months\_as\_customer;

double bank\_balance;

string crb\_status;

// Capture customer details from the user

cout << "Enter customer age: ";

cin >> age;

cout << "Enter bank balance: ";

cin >> bank\_balance;

cout << "Enter CRB status good: ";

cin >> crb\_status;

cout << "Enter months as a customer: ";

cin >> months\_as\_customer;

// Check if the customer is qualified for a loan based on the conditions

if (age > 22 && bank\_balance > 50000 && crb\_status == "good" && months\_as\_customer > 6) {

cout << “ You are qualified for the loan." << endl;

} else {

cout << " You are not qualified for the loan." << endl;

}

return 0;

}

2.#include <iostream>

#include <string>

using namespace std;

int main() {

string full\_name, course;

int score;

// Ask the user to input the full name, course, and score of the student

cout << "Enter full name of the student: ";

getline(cin, full\_name);

cout << "Enter course: ";

getline(cin, course);

cout << "Enter score: ";

cin >> score;

// Determine the grade based on the score entered

if (score >= 70) {

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: A" << endl;

} else if (score >= 60) {

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: B" << endl;

} else if (score >= 50) {

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: C" << endl;

} else if (score >= 40) {

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: D" << endl;

} else if (score >= 0 && score < 40) {

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: F" << endl;

} else {

cout << "Invalid score entered!" << endl;

}

return 0;

}

3.#include <iostream>

#include <string>

using namespace std;

int main() {

string full\_name, course;

int score;

// Ask the user to input the full name, course, and score of the student

cout << "Enter full name of the student: ";

getline(cin, full\_name);

cout << "Enter course: ";

getline(cin, course);

cout << "Enter score: ";

cin >> score;

// Determine the grade based on the score entered using switch case

switch (score / 10) {

case 10:

case 9:

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: A" << endl;

break;

case 8:

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: B" << endl;

break;

case 7:

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: C" << endl;

break;

case 6:

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: D" << endl;

break;

default:

if (score >= 0 && score < 40) {

cout << "Student name: " << full\_name << endl;

cout << "Course: " << course << endl;

cout << "Grade: F" << endl;

} else {

cout << "Invalid score entered!" << endl;

}

}

return 0;

}

4.#include <iostream>

using namespace std;

int main() {

int num1, num2;

// Ask the user to input two numbers

cout << "Enter the first number: ";

cin >> num1;

cout << "Enter the second number: ";

cin >> num2;

// Determine the maximum number using switch case

switch (num1 > num2) {

case 1:

cout << "The first number " << num1 << " is the maximum." << endl;

break;

case 0:

cout << "The second number " << num2 << " is the maximum." << endl;

break;

default:

cout << "The two numbers are equal." << endl;

}

return 0;

}

5.#include <iostream>

using namespace std;

int main() {

int choice;

double radius, length, width, base, height;

const double PI = 3.14159;

do {

// Display the menu options

cout << "Menu: " << endl;

cout << "1. Calculate the area of a circle" << endl;

cout << "2. Calculate the area of a rectangle" << endl;

cout << "3. Calculate the area of a triangle" << endl;

cout << "4. Quit" << endl;

cout << "Enter your choice: ";

cin >> choice;

// Perform the corresponding calculation based on the user's choice

switch (choice) {

case 1:

cout << "Enter the radius of the circle: ";

cin >> radius;

cout << "Area of the circle is: " << PI \* radius \* radius << endl;

break;

case 2:

cout << "Enter the length of the rectangle: ";

cin >> length;

cout << "Enter the width of the rectangle: ";

cin >> width;

cout << "Area of the rectangle is: " << length \* width << endl;

break;

case 3:

cout << "Enter the base of the triangle: ";

cin >> base;

cout << "Enter the height of the triangle: ";

cin >> height;

cout << "Area of the triangle is: " << 0.5 \* base \* height << endl;

break;

case 4:

cout << "Quitting the program. Goodbye!" << endl;

break;

default:

cout << "Invalid choice. Please select a valid option from the menu." << endl;

}

// Add a line break for readability

cout << endl;

} while (choice != 4);

return 0;

}

6.#include <iostream>

#include <chrono>

#include <thread>

using namespace std;

int main() {

int timer = 0; // Timer in seconds

while (true) {

// Simulate the traffic light changing every 5 seconds (adjust this value as needed)

this\_thread::sleep\_for(chrono::seconds(5));

timer += 5;

// Determine the current color of the traffic light based on the timer

switch (timer % 15) {

case 0:

cout << "Traffic Light: RED" << endl;

break;

case 5:

cout << "Traffic Light: YELLOW" << endl;

break;

case 10:

cout << "Traffic Light: GREEN" << endl;

break;

}

}

return 0;

}

7.#include <iostream>

#include <string>

using namespace std;

int main() {

string bookType;

int daysLate;

double lateFee = 0.0;

// Get the type of book and the number of days late from the user

cout << "Enter the type of book (regular, children's, or reference): ";

cin >> bookType;

cout << "Enter the number of days late: ";

cin >> daysLate;

// Calculate the late fee based on the type of book and the number of days late

if (bookType == "regular") {

if (daysLate <= 7) {

lateFee = daysLate \* 0.50;

} else {

lateFee = 7 \* 0.50 + (daysLate - 7) \* 1.00;

}

} else if (bookType == "children's") {

if (daysLate <= 5) {

lateFee = daysLate \* 0.25;

} else {

lateFee = 5 \* 0.25 + (daysLate - 5) \* 0.50;

}

} else if (bookType == "reference") {

lateFee = daysLate \* 1.50;

} else {

cout << "Invalid book type entered." << endl;

return 1;

}

// Display the calculated late fee

cout << "The late fee for the " << bookType << " book is: $" << lateFee << endl;

return 0;

}

8.#include <iostream>

#include <iomanip>

using namespace std;

int main() {

double purchaseAmount;

double discount = 0.0;

double totalCost;

// Get the purchase amount from the user

cout << "Enter the purchase amount: $";

cin >> purchaseAmount;

// Determine the discount based on the purchase amount

if (purchaseAmount >= 500) {

discount = 0.10; // 10% discount for purchases of $500 or more

} else if (purchaseAmount >= 200) {

discount = 0.05; // 5% discount for purchases between $200 and $499.99

}

// Calculate the total cost after applying the discount

totalCost = purchaseAmount - (purchaseAmount \* discount);

// Display the total cost with applied discount

cout << fixed << setprecision(2);

cout << "Purchase Amount: $" << purchaseAmount << endl;

cout << "Discount: " << (discount \* 100) << "% off" << endl;

cout << "Total Cost: $" << totalCost << endl;

return 0;

}

9.#include <iostream>

#include <string>

using namespace std;

int main() {

int age;

string movieType;

double ticketPrice;

// Get the age of the customer and the type of movie from the user

cout << "Enter your age: ";

cin >> age;

cout << "Enter the type of movie (regular or 3D): ";

cin >> movieType;

// Determine the ticket price based on the age and movie type

if (movieType == "regular") {

if (age < 13) {

ticketPrice = 7.5; // Child ticket price for regular movie

} else if (age >= 13 && age < 18) {

ticketPrice = 9.0; // Teen ticket price for regular movie

} else {

ticketPrice = 12.0; // Adult ticket price for regular movie

}

} else if (movieType == "3D") {

if (age < 13) {

ticketPrice = 10.0; // Child ticket price for 3D movie

} else if (age >= 13 && age < 18) {

ticketPrice = 12.0; // Teen ticket price for 3D movie

} else {

ticketPrice = 15.0; // Adult ticket price for 3D movie

}

} else {

cout << "Invalid movie type entered." << endl;

return 1;

}

// Display the calculated ticket price

cout << "The ticket price for a " << movieType << " movie for an individual of age " << age << " is: $" << ticketPrice << endl;

return 0;

}

10.#include <iostream>

using namespace std;

int main() {

double accountBalance = 1000.0; // Example account balance

double withdrawalAmount;

double dailyLimit = 500.0; // Example daily withdrawal limit

// Get the withdrawal amount from the user

cout << "Enter the amount to withdraw: ";

cin >> withdrawalAmount;

// Verify if the withdrawal amount is within the daily limit and the account balance

if (withdrawalAmount > dailyLimit) {

cout << "Withdrawal amount exceeds the daily limit." << endl;

} else if (withdrawalAmount > accountBalance) {

cout << "Insufficient funds in the account." << endl;

} else {

// Process the withdrawal if the conditions are met

accountBalance -= withdrawalAmount;

cout << "Withdrawal of $" << withdrawalAmount << " is successful." << endl;

cout << "Remaining account balance: $" << accountBalance << endl;

}

return 0;

}