//Voting Eligibility Checker:

Create a program that determines whether a person is eligible to vote in an election based on the following criteria:

Age must be 18 or above.

Must be a citizen of the country.

Prompt the user to input their age, citizenship status (yes/no), and felony status (yes/no), and then use complex logical expressions to determine and output whether they are eligible to vote.

start

print "enter age"

input age

print "citizenship status: (yes/no)"

input citizenship\_Status

print "felony status: (yes/no)"

input felony\_Status

if (age >= 18 && citizenship\_Status == "yes" && felony\_Status == "yes")

print "you are eligible for vote"

else print "you are not eligible for vote"

end

//Credit Card Approval System:

Design a program that evaluates whether a person is approved for a credit card based on the following criteria:

Minimum credit score requirement: 700

Maximum debt-to-income ratio: 30%

No recent bankruptcies (within the last 5 years)

Prompt the user to input their credit score, debt amount, income amount, and bankruptcy status, then use complex logical expressions to determine and output whether they are approved for the credit card.

if (creditscore >=700 && debtamount <= (incomeamount-70%) && bankruptcies=="0"){

System.out.println(" approved for the credit card");

}else{

System.out.println(" not approved for the credit card");

}

//Employee Promotion Criteria:

Develop a program that assesses whether an employee is eligible for a promotion based on the following criteria:

Must have worked for the company for at least 5 years.

Must have a performance rating of "excellent."

Must have completed at least one advanced training program.

Prompt the user to input their years of service, performance rating, and training status, then use complex logical expressions to determine and output whether they are eligible for promotion.

start

print "enter work experience"

input experience

print "enter performance rating"

input performance\_rating

print "enter no. of advanced training program attend"

input training\_program

if (experience >= 5 && performance\_rating == "excellent" && training\_program >= 1)

print "you are eligible for promotion"

else print "you are not eligible for promotion"

end

//Ticket Pricing:

You are designing a ticket pricing program for a movie theater. The program should prompt the user for their age and the type of movie they want to watch (e.g., "regular" or "3D"). Based on the age and movie type, the program should calculate and output the ticket price according to the following rules:

Regular Movie:

Age < 18: $8

Age >= 18: $12

3D Movie:

Age < 18: $10

Age >= 18: $15

start

print enter age

input age

print enter type of movie e.g reguler or 3D

switch(movieType)

case "regular":

if age < 18 print "price of ticket is" + $8

else print "price of ticket is" + $12

break

case "3D":

if age < 18 print "price of ticket is" + $10

else print "price of ticket is" + $15

break

default: "enter movieType"

Prime Number Generator:

Create a program that generates and displays all prime numbers within a specified range (e.g., between 1 and 100). Use nested loops to iterate through each number in the range and determine if it's a prime number. A prime number is a whole number greater than 1 that has no positive divisors other than 1 and itself.

start

print enter no. range

input num

for i range(2,num/2,i++)

if num%i!=0 print num

Factorial Calculator:

Write a program that calculates the factorial of a given number using a loop. The factorial of a non-negative integer n is denoted by n! and is the product of all positive integers less than or equal to n. For example, 5! = 5 × 4 × 3 × 2 × 1 = 120. Prompt the user to enter a number, then use a loop to calculate and output its factorial.

start

print enter number

input number

declear factorial = 1;

for (int i = 1; i <= number; i++)

factorial \*= i;

print factorial

end

Temperature Converter:

Develop a temperature converter program that converts temperatures between Celsius and Fahrenheit. The program should ask the user to choose the conversion type (Celsius to Fahrenheit or Fahrenheit to Celsius) and then input the temperature value. Use a switch statement to handle the conversion type, and if-else statements to perform the actual conversion.

start

declear result

print "enter temp. conversion type"

input temp\_type

print "enter temperature value"

input temp\_value

switch(temp\_type)

case "Celsius to Fahrenheit":

result = ( temp\_value × 9/5) + 32

break

case " Fahrenheit to Celsius":

result = (temp\_value − 32) × 5/9

break

default: "Plz enter temp\_type"

print result

end

Day of the Week:

Write a program that prompts the user to enter a number between 1 and 7 representing a day of the week (1 for Sunday, 2 for Monday, and so on). Use a switch statement to determine the day entered by the user and output the corresponding day name. If the user enters a number outside the range of 1-7, display an error message.

start

declear day\_name

print "enter num Between 1 to 7"

input num

switch(num)

case 1:

day\_name = "Monday"

break

case 2:

day\_name = "Tuesdays"

break

case 3:

day\_name = "Wednesday"

break

case 4:

day\_name = "Thursday"

break

case 5:

day\_name = "Friday"

break

case 6:

day\_name = "Saturday"

break

case 7:

day\_name = "Sunday"

break

default: "only select value between 1 to 7"

print day\_name

end

BMI Calculator:

Create a BMI (Body Mass Index) calculator program. The program should ask the user for their weight (in kilograms) and height (in meters). Then, calculate the BMI using the formula BMI = weight / (height \* height). Finally, classify the BMI into categories according to the following criteria:

Underweight: BMI < 18.5

Normal weight: 18.5 <= BMI < 25

Overweight: 25 <= BMI < 30

Obese: BMI >= 30

start

declear BMI

print "enter weight in kg"

input weight

print "enter height in meters"

input height

BMI = weight / (height \* height)

if (BMI < 18.5) print "Underweight"

else if (BMI < 25 && BMI >= 18.5) print "Normal weight"

else if (BMI < 30 && BMI >= 25) print "Overweight"

else print "obese"

end

// Fibonacci Sequence Generator:

Write a program to generate the Fibonacci sequence up to a specified number of terms. The Fibonacci sequence starts with 0 and 1, and each subsequent number is the sum of the two preceding numbers (0, 1, 1, 2, 3, 5, 8, 13, ...). Prompt the user to enter the number of terms they want to generate and use a loop to calculate and output the sequence.

start

declear nextnum

print "enter number"

input number

first=0

second=1

print first + "," + second

for(int i =2; i<= number; i++)

nextnum=first+second

print nextnum

first=second

second=nextnum

end

//Product Discount Calculator:

Write a program that calculates the discount amount for a product based on the following criteria:

If the product price is over $100 and the customer is a premium member, they get a 20% discount.

If the product price is over $100 and the customer is not a premium member, they get a 10% discount.

If the product price is $100 or less, there is no discount.

Prompt the user to input the product price and their premium membership status, then use complex logical expressions to calculate and output the discount amount.

start

print "enter product price"

input product\_price

print "enter premium membership status (yes/no)"

input membership\_status

if (product\_price > 100 && membership\_status.equal"yes")

print "you are product price is" + product\_price-20%

else if (product\_price > 100 && membership\_status.equal"no")

print "you are product price is" + product\_price-10%

else print "you are product price is"+ product\_price

end

//Health Insurance Plan Eligibility:

Design a program that determines whether a person is eligible for a particular health insurance plan based on the following criteria:

Age must be between 18 and 65.

Must not have any pre-existing medical conditions.

Must not have any recent hospitalizations (within the last 6 months).

Prompt the user to input their age, medical condition status, and hospitalization status, then use complex logical expressions to determine and output whether they are eligible for the insurance plan.

start

print "enter age"

input age

print "have any pre-existing medical conditions (yes/no)"

input medical\_conditions

print "have any recent hospitalizations within the last 6 months (yes/no)"

input hospitalizations\_status

if (18 <= age <= 65 && medical\_conditions.equal"no" && hospitalizations\_status.equals("no"))

print "you are eligible for Health Insurance Plan"

else print "you are not eligible for Health Insurance Plan"

end

// student grade card

start

input

if score > 100 or score < 0 print invalid

else if score >=90 && score <= 100 print A

else if score >=80 && score <= 89 print B

else if score >=70 && score <=79 print c

else if score >=60 && score <= 69 print d

else print f

end

// Leap Year

start

enter year

if year%100 ==0

if year%400 ==0 print leap year

else print not leap year

else

if year%4 ==0 print "leap year"

else print "not leap year"

end