Lab 2- Selection Programs

1. Develop a program that will prompt the user to enter his or her age and if the user age is less than or equal to 18 display the message:

   “You are too young to go beyond this point”.

2. Modify Question 1 program so that if the person's age is greater than 18 years the program will print

   “You have been granted access”.

3. Modify the Question 1 and Question 2 with the following functionality:
   If the person is younger than 16, output “You must stop here!”
   Otherwise, output “access denied!”

4. Develop a program that will receive two numbers from the keyboard. Program should display to the screen the quotient of the two numbers.The quotient calculation (first number divided by the second number) is only to be performed if the second number does not equal zero.

5. A student is given 3 tests, each marked out of 100. The student passes if their average mark is greater than or equal to 50 and fails if their average mark is less than 50. Develop a program that will prompt the user for 3 marks and print “Pass” if the student passes and “Fail” if the student fails.

6. Develop a program that will prompt the user to enter a number and then display if the number is an odd or an even number.

7. Develop a program which, when run, works as follows:

   Hi, what's your name ? Input: Mr.Smith
   Welcome to our show, Mr Smith
   How old are you? Input: 52
   Hmmmm, you don’t look a day over 52.
   Tell me, Mr.Smith, how many cars do you own? 0
   Wow, come on now Mr Smith, you are 52 and do not own a car!

Note, if the user is less than 22 years then they should not be allowed to continue the game and should be forced to exit the game.
If the user owns a car or own multiple cars then the rest of the program will work as follows:
Mr Smith, what is the brand and model of your car? Input: Nissan B14
Nissan B14 is a great choice for a car.
Mr Smith, have a great day. Good Bye!!

8. Develop a program that will read two numbers and an integer code from the keyboard. The value of the integer code should be 1, 2, 3 or 4.

    - If the value of the code is 1, compute the sum of the two numbers.
    - If the code is 2, compute the difference (first minus second).
    - If the code is 3, compute the product of the two numbers.
    - If the code is 4, and the second number is not zero, compute the quotient (first divided by the second).
    - If the code is not equal to 1, 2, 3 or 4, display an error message.

    The program is then to display the two numbers, the integer code and the computed result to the screen.

9. A home mortgage authority requires a deposit on a home loan according to the following schedule:

Loan $	Deposit
less than $25 000	5% of the loan value
$25 000–$49 999	$1250 + 10% of loan over $25 000
$50 000–$100 000	$5000 + 25% of loan over $50 000

    Loans in excess of $100 000 are not allowed. Develop a program that will *read* Loan amount and *compute* and *print* the required deposit.

10. Design a program that will *prompt* an operator for a student name, number and the student's exam score out of 100. Your program is then to *match* the exam score to a letter grade and *print* the grade to the screen. Calculate the letter grade as follows:

90 and above	A
80–89.9	B
70–79.9	C
60–69.9	D
below 60	F