WEEK – 1 Exercises

1. Write a C++ program to exchange two variables without using any temporary variable.

2. Write a C++ program to find the largest of three numbers.

3. Write a C++ program to calculate the area of a circle and a triangle.
4. Write a C++ program to convert the time in seconds to hours, minutes and seconds.
5. Write a C++ program to convert the distance in mm to cm, inch, feet (1 cm = 10mm, 1 inch = 2.5cm, 1 feet = 12 inches).
6. Write a C++ program to convert the temperature given in Fahrenheit to Celsius and vice versa. (C = 5/9(F-32))
7. Write a C++ program to calculate the compound interest.
   $A = P (1 + r/n)^{nt}$ *[Hint after bonus question]*
   Where, A = the future value of the investment/loan, including interest
   P = the principal investment amount (the initial deposit or loan amount)
   r = the annual interest rate
   n = the number of times that interest is compounded per unit t
   t = the time the money is invested or borrowed for
8. Write a C++ program to accept student details such as Name, Registration number, Year of Joining, Semester number, marks in five subjects. Calculate the average marks as total marks divided by five. Design a score card as based on the following grading criteria:

Average > =90	Grade A
Average between 80 and 89	Grade B
Average between 61 and 79	Grade C
Average between 51 and 59	Grade D
Average between 41 and 49	Grade E
Less than 40	Grade F (Fails)

Score Card for Student: John Smith

Registration Number: 1500009199 Semester: I Year: 2016
Grade Assigned:

Serial No.	Subject Name	Marks Scored (out of 100)
1	Object Oriented Programming	87
2	DBMS	90
3	Research Methodology	89
4	Computational Mathematics	80

5	Web Technologies		88
		Total:	434
		Average:	86.5
		Grade:	B

Bonus Question:

1. Write a C++ program, which generates all the possible combinations of the given 3-digit number.

Hint: *While compiling, ensure that you use the option –ln with the general compilation command.*