OBJECT ORIENTED PROGRAMMING

ASSIGNMENT 4:-

Write a function template and class template selection sort. Write a program that inputs, sorts and outputs an integer array and a float array.

DESCRIPTION:-

Templates in C++

A template is a simple and yet very powerful tool in C++. The simple idea is to pass data type as a parameter so that we don’t need to write the same code for different data types. For example, a software company may need sort() for different data types. Rather than writing and maintaining the multiple codes, we can write one sort() and pass data type as a parameter.

C++ adds two new keywords to support templates: ‘template’ and ‘typename’. The second keyword can always be replaced by keyword ‘class’.

**What is the difference between function overloading and templates?**  
Both function overloading and templates are examples of polymorphism feature of OOP. Function overloading is used when multiple functions do similar operations, templates are used when multiple functions do identical operations.

OUTPUT :-

+++++++#######  SORTING BY SELECTION SORT  ##########

Integer sorting...

Total number of elements in the list 4

1 43 23 56

sorted list is:-        1               23              43              56

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Floating sorting...

Total number of elements in the list 4

1.23 3.034 2.34 6.43

sorted list is:-        1.23            2.34            3.034           6.43