* Assignment 5 *

Title: - function Template.

problem Statement:

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

Pre requisite: - object oriented programming

objective; - To learn concept of template.

Theory -

templates are the foundation of generic templates are the foundation of generic programming which involves writing code in a way that is independent of any particular type A template is a blueprint or formula for creating a generic class be a function

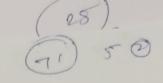
function remplate:

The general form of a template function defination is shown here.

template ¿ class type > net-type func-name

(parametalist)

II body of function!



used by the function this name can be used within the function defination.

Mass Template:

Just as we can define junction to femplate we can also define class template. The general form of a general class declaration is shown.

template < class type 1 class class-name &

3

Here type is the placeholder type name, which will be specified when adase is in stantiched you can define more than one generic data type by using a comma-specated list.

slection Sost:

slection Sort is 9 Sorting algorithm,

Specifically an inplace comparison Sort. It has

olnot time Comptexity making it in equivert on

large list and generally perform woose than the

similar exection Sort, selection Sort is noted for

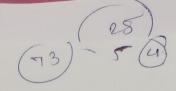
its simplicity, and it has performance advantage

over more complicated adjorithm in certain

situation particularly where axillary memory is

located

How Selection 80st works 8 27 1707 35 19 42 44 33 14 27 [19] 85 19 42 44 10 83 27 33 35 19 42 14 10 14 for list position in the Boxted list, the whole list is Scanned Bequentially. The first position where 14 is 80sted presently. We 88 auch the whole 11st and find that 10 is the lowest value. * Sorwe replace 14 with 10. After one iteration 16, which happens to be the minimum value in the list, appear in the first position of sorted * for the second position, where 33 is residing We start scanning the crest of the list in linear maner. * we find that 14 is the second lowest value in the list and it should appear at the Second place. we swap the value. * After two iteration two least value are positioned at the beginning in the sorted manner. The same process is applied to the rest of the item in the array. facilitie: - linux operating system : GH



Algorithm:
0 start
6 Défine template junction for selection soot
(3) In main (1 define two groups, one Jos tho
integer and another for float and take
(3) In main (1 define two mrsays, one for the integer and another for float and take input for both the array and au sorting functions template to sost the number.
functions template to sost the number.
W step.
(on dusion;
Hence we have studied concept of
Jan tion Template.