**ASSIGNMENT-2**

**DATA STRUCTURE AND ALGORITHM LAB**

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## Q1. Implement the following programs in C using functions

**a) Selection Sort**

**Ans:**

**Algorithm:**

**Step 1:** Declare function ‘main’ with return type ‘int’.

**Step 1.1:** Declare integer type variables ‘n’, ’i’, ’j’, ’temp’, ’min’ and integer type array ‘arr’ of size 100.

**Step 1.2:** Print “Enter the number of elements in the array:”

**Step 1.3:** Read ‘n’

**Step 1.4:** Print “Enter the elements in the array”

**Step 1.5:** Initialize ‘i’

i<-0

**Step 1.6:** Repeat the following steps as long as i<n **Step 1.6.1:** read the array element into arr[i] **Step 1.6.2:** i<-i+1

**Step 1.7:** Again initialize ‘i’ i<-0

**Step 1.8:** Repeat the following steps as long as i<n-1

**Step 1.8.1:** min<-i

**Step 1.8.2:** Initialize ‘j’ j<-i+1

**Step 1.8.3:** Repeat the following steps as long as j<n

**Step 1.8.3.1:** if arr[j]<arr[min]

**Step 1.8.3.2:** min<-j

**Step 1.8.3.3:** j<-j+1

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