SSN COLLEGE OF ENGINEERING
B.E. (Computer Science and Engineering), Sec B, Semester 2
Model Lab: Sample

Time: 10.00–1.00 | CS8261 Programming in C Lab | Max marks: 50

Program

1. Declare an array `a` of `int` in `main()` and initialize it. Write a function `array_print(a, low, high)` to print the subarray `a[low:high]`. Test your function from `main()`. (30)
2. Define a function `minimum(a, low, high)` to find out the smallest number in the subarray `a[low:high]`. Let it return the index of the smallest number. Test it from `main()`. (20)
3. Write a function `swap (a, i, j)` that exchanges the numbers in the positions `i` and `j` of array `a`. Test it from `main()`. (20)
4. Write a function `sort(a, n)` that implements the following idea, where `n` is the size of the array `a`. Test it from `main()`. (10)

```
swap a[0], a[minimum(a,0,n)]
swap a[1], a[minimum(a,1,n)]
swap a[2], a[minimum(a,2,n)]
...
swap a[n-2], a[minimum(a,n-2,n)]
```

5. Modify `sort()` to sort the array of numbers in descending order. (10)

Viva

6. Why did we choose to return the index of the smallest number in the function `minimum(a,low, high)`, and not the number itself? (5)

7. Write the code for `swap (a[i], a[j])`? Compare it with `swap (a, i, j)`. (5)

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