**SVKM's NMIMS**

**Mukesh Patel School of Technology Management and Engineering, Mumbai**


# Programming for Problem Solving (Exp 6 - 2)

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# Task 1:

```
#include <iostream>
using namespace std;

int main() {
   int size_array;
   cout << "Enter the number of elements: ";
   cin >> size_array;
   int elements[size_array];
   cout << endl;
   for(int i; i < size_array; i++) {
      cout << "\nEnter the value (" << i+1 << "): ";
      cin >> elements[i];
   }
   int max_val = elements[0], min_val = elements[0];
   for(int i; i < size_array; i++) {
      if(max_val < elements[i]) {
         max_val = elements[i];
      }
      if(min_val > elements[i]) {
         min_val = elements[i];
      }
   }
   cout << "\n\nMaximum Value: " << max_val << "\nMinimum Value: "
<< min_val << "\n";

   return 0;
}
```

# Task 2:

```
#include <iostream>

using namespace std;
int main() {
   int a[10], n, i;
   cout << "Enter a number: ";
   cin >> n;
   for (i = 0; n > 0; i++) {
      a[i] = n % 2;
      n = n / 2;
   }
   cout << "\n\nBinary of the given number: ";
   for (i = i - 1; i >= 0; i--) {
      cout << a[i];
   }
   cout << "\n";
}
```

# Task 3:

```
#include <iostream>
using namespace std;

int main() {
   int size_array, j;
   cout << "Enter the number of elements: ";
   cin >> size_array;
   int old_arr[size_array], new_arr[size_array];
   cout << endl;
   for(int x = 0; x < size_array; x++) {
      cout << "\nEnter the value (" << x+1 << "): ";
```

```
      cin >> old_arr[x];
   }

   for(int x = 0; x < size_array; x++) {
      if(old_arr[x] % 2 == 0) {
         new_arr[j++] = old_arr[x];
      }
   }
   for(int x = 0; x < size_array; x++) {
      if(old_arr[x] % 2 != 0) {
         new_arr[j++] = old_arr[x];
      }
   }

   cout << "\n\nOld Array:";
   for(int x = 0; x < size_array; x++) {
      cout << "\t" << old_arr[x];
   }
   cout << "\n\nNew Array:";
   for(int x = 0; x < size_array; x++) {
      cout << "\t" << new_arr[x];
   cout << "\n";
   return 0;
}
```

# Homework Questions:

## 1:

Array Index cannot be negative and always starts from zero.

# 2:

```
#include <iostream>
using namespace std;

int main() {
   int size_array;
   cout << "Enter the number of elements: ";
   cin >> size_array;
   int elements[size_array];
   cout << endl;
   for(int i; i < size_array; i++) {
      cout << "\nEnter the value (" << i+1 << "): ";
      cin >> elements[i];

   }
   int el_search, no_count, index;
   cout << "\n\nEnter the element to be searched: ";
   cin >> el_search;
   bool found;
   for(int i; i < size_array; i++) {
      if(el_search == elements[i]) {
         found = true;
         index = i;
         no_count++;
      }
   }
   if(found) {
      cout << "\n\nElement found! (At Index:" << index << ")\nNumber of
times: " << no_count << "\n";
   }
   else {
      cout << "\n\nElement not found!\n";
   }
```

```
    return 0;
}
```