**SVKM’s NMIMS**

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

**Department of Electronics & Telecommunication**



**Programming for Problem Solving (Exp 9 - 2)**

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| **Program: B. Tech Data Science (1st)** | **Batch: J1** |
| **Date of Experiment: 12/11/2022** | **Date of Submission: 19/11/2022** |

**Task 1:**

**Code:**

#include <iostream>

using namespace std;

int main () {

int var[3] = {10, 100, 200}, \*ptr;

ptr = var;

cout << "Incrementing Pointer\n";

for (int i = 0; i < 3; i++) {

cout << "Address of var[" << i << "] = " << ptr << endl;

cout << "Value of var[" << i << "] = " << \*ptr << endl;

ptr++;

}

ptr = &var[2];

cout << "\nDecrementing Pointer\n";

for (int i = 3; i > 0; i--) {

cout << "Address of var[" << i << "] = " << ptr << endl;

cout << "Value of var[" << i << "] = " << \*ptr << endl;

ptr--;

}

return 0;

}

**Task 2:**

**Code:**

#include <iostream>

using namespace std;

int main() {

int x, y, \* a, \* b, temp;

cout << "Enter the value of x and y\n";

cin >> x >> y;

cout << "\nBefore Swapping\n x = " << x << " y = " << y;

a = & x;

b = & y;

temp = \* b;

\* b = \* a;

\* a = temp;

cout << "\nAfter Swapping\n x = " << x << " y = " << y;

return 0;

}

**Task 3:**

**Code:**

#include <iostream>

using namespace std;

int largest(int \*arr, int length);

int main() {

int size\_arr;

cout << "Enter number of elements: ";

cin >> size\_arr;

cout << endl;

int array[size\_arr];

for (int i = 0; i < size\_arr; i++) {

cout << "\nEnter element no " << i + 1 << ": ";

cin >> array[i];

}

cout << "\nThe Largest Element is: " << largest(array, size\_arr) << endl;

}

int largest(int \*arr, int length) {

int max = arr[0];

for (int i = 0; i < length; i++)

if (arr[i] > max) {

max = arr[i];

}

return max;

};

**Task 4:**

**Code:**

#include <iostream>

using namespace std;

int main() {

int var = 123;

int \*ptr = &var;

int \*\*pptr = &ptr;

cout << "Value of var = " << var << endl;

cout << "Value of var using single pointer = " << \*ptr << endl;

cout << "Value of var using double pointer = " << \*\*pptr << endl;

return 0;

}

**Task 5:**

**Code:**

#include <iostream>

using namespace std;

int main() {

char str[100];

char \* ptr;

cout << "Enter a string: ";

cin >> str;

ptr = str;

cout << "Entered string is: ";

while ( \* ptr != '\0') {

cout << \* ptr++;

}

return 0;

}

**Homework Questions:**

**1:**

**Output:**

129, a