**SVKM’s NMIMS**

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

**Department of Electronics & Telecommunication**



**Programming for Problem Solving (Exp 5)**

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| **Program: B. Tech Data Science (1st)** | **Batch: J1** |
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**Task 1:**

**1:**

1234

**2:**

12456

**3:**

00

**4:**

1

22

333

4444

55555

**Task 2:**

#include <iostream>

#include <iomanip>

using namespace std;

int main()

{

for(int i = 0; i < 10; i++) {

for(int x = 1; x <= 10; x++) {

cout << setw(2) << (x + (i \* 10)) << " ";

}

cout << endl;

}

return 0;

}

**Task 3:**

**1:**

#include <iostream>

using namespace std;

int main()

{

for(int i = 1; i <= 4; i++)

{

for(int j = 1; j <= i; j++)

{

cout << j;

}

cout << endl;

}

    return 0;

}

**2:**

#include<iostream>

using namespace std;

int main() {

int num = 1;

for (int i = 1; i <= 4; i++) {

for (int space = 6; space > i; space--)

cout << " ";

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

cout << num++ << " ";

cout << endl;

}

cout << endl;

    return 0;

}

**Task 4:**

#include <iostream>

#include <cmath>

using namespace std;

int main() {

for (int i = 2; i < 100; i++)

for (int j = 2; j \* j <= i; j++) {

if (i % j == 0)

break;

else if (j + 1 > sqrt(i)) {

cout << i << " ";

}

}

return 0;

}

**Homework Questions:**

**1:**

#include <iostream>

using namespace std;

int main() {

int n;

cout << "Enter a number: ";

cin >> n;

cout << "\n\n";

for (int i = n; i >= 1; i--) {

int x = n - i + 1;

for (int j = 1; j <= i; j++) {

cout << x++;

}

cout << endl;

}

return 0;

}

**2:**

#include <iostream>

using namespace std;

int main() {

char ch = 'A';

for (int i = 1; i <= 5; i++) {

for (int j = 5; j >= i; j--)

cout << " ";

for (int k = 1; k <= i; k++)

cout << ch++;

ch--;

for (int m = 1; m < i; m++)

cout << --ch;

cout << "\n";

ch = 'A';

}

return 0;

}