**Bangabandhu Sheikh Mujibur Rahman Science &**

**Technology University**

**Structured Programming Language**

**Topic: Divisibility Test**

**Submitted By:**

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**#include <stdio.h>**

**#include <stdlib.h>**

**int main()**

**{**

**char lio[400];**

**int i,n,sum=0,sum4=0,sum8;**

**printf("Length of number: ");**

**scanf("%d",&n);**

**getchar();**

**printf("Number: ");**

**for(i=0;i<n;i++){**

**scanf("%c",&lio[i]);**

**sum=sum+lio[i]-48;}**

**i--;**

**//conditions for divisibility by 2:**

**if((lio[i]-48)%2==0)**

**printf("the number is divisible by 2\n");**

**else**

**printf("the number is not divisible by 2\n");**

**//conditions for divisibility by 3:**

**if(sum%3==0)**

**printf("the number is divisible by 3\n");**

**else**

**printf("the number is not divisible by 3\n");**

**//conditions for divisibility by 4:**

**sum4=lio[i]-48+10\*((lio[i-1])-48);**

**if(sum4%4==0)**

**printf("the number is divisible by 4\n");**

**else**

**printf("the number is not divisible by 4\n");**

**//conditions for divisibility by 5:**

**if((lio[i]-48)%5==0)**

**printf("the number is divisible by 5\n");**

**else**

**printf("the number is not divisible by 5\n");**

**//conditions for divisibility by 6:**

**if(sum%3==0 && (lio[i]-48)%2==0)**

**printf("the number is divisible by 6\n");**

**else**

**printf("the number is not divisible by 6\n");**

**//conditions for divisibility by 8:**

**sum8=lio[i]-48+10\*((lio[i-1])-48)+100\*((lio[i-2])-48);**

**if(sum8%8==0)**

**printf("the number is divisible by 8\n");**

**else**

**printf("the number is not divisible by 8\n");**

**//conditions for divisibility by 9:**

**if(sum%9==0)**

**printf("the number is divisible by 9\n");**

**else**

**printf("the number is not divisible by 9\n");**

**//conditions for divisibility by 10:**

**if((lio[i]-48)==0)**

**printf("the number is divisible by 10\n");**

**else**

**printf("the number is not divisible by 10\n");**

**return 0;**

**}**