

# Programming in Java for Web Applications

CSA-0985

8.

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1. Sum of natural numbers upto n.

```
for (int i=0; i<=n; i++)  
{  
    sum += i;  
}
```

2. Given no is prime no or not.

```
for (int i=2; i<=n; i++){  
    if (n % i == 0)  
    {  
        c++;  
    }  
}  
if (c == 0)
```

3. Find the factorial of n.

```
for (int i=1; i<=n; i++)  
{  
    b = b * i;  
}
```

Palindrome.

```
while (a != 0) {  
    b = b * 10 + (a / 10);  
    a = a / 10;  
}
```

8. Sum of the digits :

```
while (n != 0)  
{  
    digit = n / 10;  
    sum += digit;  
    n /= 10;  
}
```

9. Numbers divisible by 5 and 7.

```
if (n % 5 == 0 and n % 7 == 0)  
    print ("divisible")  
else  
    print ("not divisible")
```

10. Perfect number upto n.

```
for (int i = 1; i <= n / 2; i++)  
{  
    if (n % i == 0)  
        sum += i;  
}  
Return sum == n.
```

18 Voting Eligibility:

```
if (age >= 18)
```

```
    Print ("You are eligible")
```

```
else
```

```
    Print ("You are not eligible")
```

19 Sum of square root and cubic root numbers:

```
while for (int i=0; i<20; i++)
```

```
    m = x2 * x;
```

```
    n = x3 * x * x;
```

```
    S = m + n;
```

Vowels and Consonants:

```
for (int i=0; s[i]; i++)
```

```
{ if ((s[i] >= 'a' && s[i] <= 'z') || s[i] >= 'A' && s[i] <= 'Z'))
```

```
{ if (s[i] == 'a' || s[i] == 'e' || s[i] == 'i' || s[i] == 'o' || s[i] == 'u' ||  
    s[i] == 'A' || s[i] == 'E' || s[i] == 'I' || s[i] == 'O' || s[i] == 'U')
```

```
    v++;
```

```
else
```

```
    c++;
```

```
}
```

```
}
```

4. Fibonacci:

```
while (n--){
    c=a+b;
    printf ("%d", c);
    a=b;
    b=c;
}
```

5. Celsius to Fahrenheit:

$$\text{Fahrenheit} = ((\text{Celsius} * 9) / 5) + 32;$$

6. Fahrenheit to Celsius:

$$\text{Celsius} = (\text{Fahrenheit} - 32) * 5/9;$$

7. Leap Year:

```
if (year % 400 == 0)
```

```
else if (year % 100 == 0)
```

```
else if (year % 4 == 0)
```

```
else
```

```
    print ("Not a leap year")
```

11. GCD and LCM:

```
for (int i=1; i<=a && i<=b; i++)  
{  
    if (a%i==0 && b%i==0)  
    {  
        gcd = i;  
        lcm = (a*b)/i;  
    }  
}
```

12. Decimal to Binary:

```
while (n>0)  
{  
    b[index] = n%2;  
    n/=2;  
    index++;  
}  
for (int i = index-1; i>=0; i--)
```

13. Binary to decimal:

```
while (n>0)  
{  
    rem = num%10;  
    dec_val = dec_val + rem * base;  
    n = n/10;  
    b = b * 2;  
}
```

4. Reverse the number:

```
while (n != 0)
{
    r = (n * 10) + (n / 10);
    n = n / 10;
}
```

5. Armstrong Number:

```
while (n != 0)
{
    c++;
    n = n / 10;
}
n = temp;
while (n != 0)
{
    m = m + pow(n / 10, c);
    n = n / 10;
}
```

6. Happy Number:

```
while (sum != 1 && sum != 4) {
    sum = 0;
    while (n > 0) {
        temp = n / 10;
        sum = sum + (temp * temp);
        n = n / 10;
    }
    n = sum;
}
```