

MiniAsgn1

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1 Program1 - Printing Statement

1.1 Lisp Code

```
1 ;;  
2 (defun Print ()  
3   "Hello World !!" ; printing a statement  
4 )  
5 ;;
```

1.2 Explanation

In the above function Print, we are going to print *Hello World !!* statement.

2 Program2 - Subtraction of 2 numbers

2.1 Lisp Code

```
1 ;;  
2 (defun Subtract ()  
3   "Computing 5-9" ; computing value of 5-9  
4   (- 5 9)  
5 )  
6 ;;
```

2.2 Explanation

In the above function Subtract, I am going to subtract *9 from 5*.

3 Program3 - Incrementing value of X by 4

3.1 Lisp Code

```

1 ;;
2 (defun IncrementByFour (X)
3   "Adding 4 to X" ; incrementing by 4
4   (+ X 4)
5 )
6 ;;

```

3.2 Explanation

In the above function IncrementByFour, I am going to add 4 to the passed parameter X .

4 Program4 - Computing cube of X

4.1 Lisp Code

```

1 ;;
2 (defun Cube (X)
3   "Multiplying X three time results cube of X"
4   (* X X X)
5 )
6 ;;

```

4.2 Explanation

In the above function Cube, I am going to compute the cube of passed parameter X .

5 Program5 - X modulo 5

5.1 Lisp Code

```

1 ;;
2 (defun Modulo (X)
3   "Remainder after dividing X by 5"
4   (rem X 5)
5 )
6 ;;

```

5.2 Explanation

In the above function Modulo, I am going to compute the remainder after dividing X by 5.

6 Program6 - Factorial of X

6.1 Lisp Code

```
1 ;;
2 (defun Factorial (X)
3   "Computing the factorial of X"
4   (if (= X 1)
5       1
6       (* X (Factorial (- X 1)))))
7 ;;
```

6.2 Explanation

In the above function Factorial, I am going to compute the factorial of X by 5.

7 Program7 - Comparison of X with a constant

7.1 Lisp Code

```
1 ;;
2 (defun Comparison (X)
3   (if (>= X 18)
4       "You are allowed to caste a vote."
5       ))
6 ;;
```

7.2 Explanation

In the above function Comparison, A person is allowed to caste a vote only if his/her age X is greater than 18

8 Program8 - Maximum

8.1 Lisp Code

```
1 ;;
2 (defun Maximum ()
3   "Finding maximum amongst 3 numbers"
4   (max 34 56789 120))
5 ;;
```

8.2 Explanation

In the above function Maximum, I'm going to calculate the maximum amongst given 3 numbers 34, 56789 and 120 which is 56789.

9 Program8 - Equality

9.1 Lisp Code

```
1 ;;  
2 (defun Equality (X)  
3   "Checking whether X is equal to 6 or not ??"  
4   (if (= X 6)  
5       "Yes X is equal to 6"  
6   ))
```

9.2 Explanation

In the above function Equality, I'm going to check whether passed X is equal to 6 or not ? Printing statement if it is.

10 Program9 - Fibonacci Series

10.1 Lisp Code

```
1 ;;  
2 (defun Fibonacci (N)  
3   "Computing the N-th Fibonacci number"  
4   (if (or (zerop N) (= N 1))  
5       1  
6       (+ (Fibonacci (- N 1)) (Fibonacci (- N 2)))))  
7 ;;
```

10.2 Explanation

In the above function Fibonacci, I'm going to calculate the N-th fibonacci number of a series recursively.