

## EXPERIMENT:17 Write a Prolog Program to Sum the Integers from 1 to n.

### PROGRAM:

```
% sum_to_n(N, Sum) :- Sum is the sum of integers from 1 to N.
```

```
sum_to_n(0, 0).
```

```
sum_to_n(N, Sum) :-
```

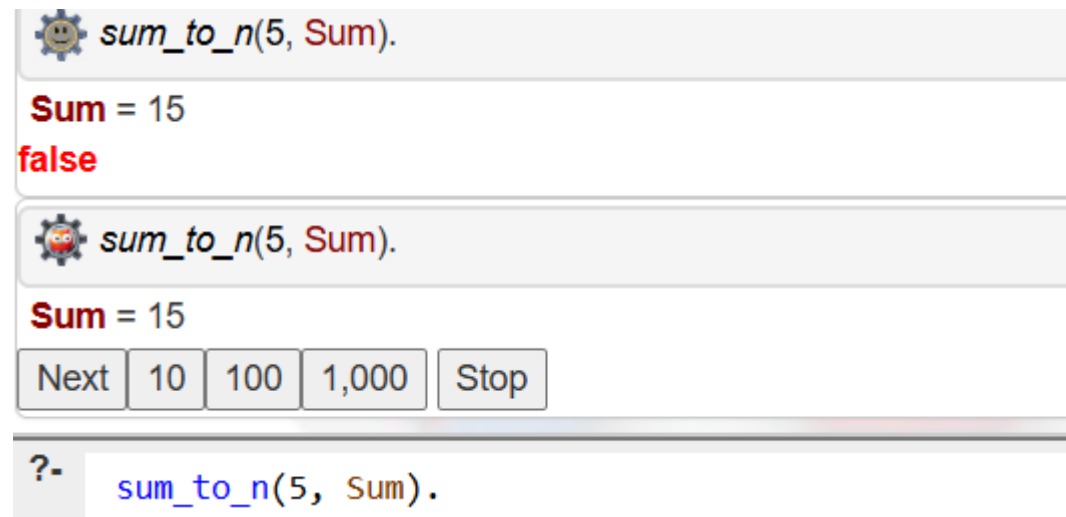
```
    N > 0,
```

```
    N1 is N - 1,
```

```
    sum_to_n(N1, Sum1),
```

```
    Sum is Sum1 + N.
```

### OUTPUT:



The screenshot shows a Prolog interpreter window with two query sessions. The first session shows the query `sum_to_n(5, Sum).` with the result `Sum = 15` and the status `false`. The second session shows the same query, with the result `Sum = 15` and a row of buttons: `Next`, `10`, `100`, `1,000`, and `Stop`. Below the window, the command prompt shows the query `?- sum_to_n(5, Sum).`

```
Accuracy: 1.0
|--- petal width (cm) <= 0.80
|   |--- class: 0
|--- petal width (cm) > 0.80
|   |--- petal length (cm) <= 4.75
|       |--- petal width (cm) <= 1.65
|           |--- class: 1
|           |--- petal width (cm) > 1.65
|               |--- class: 2
|       |--- petal length (cm) > 4.75
|           |--- petal width (cm) <= 1.75
|               |--- petal length (cm) <= 4.95
|                   |--- class: 1
|                   |--- petal length (cm) > 4.95
|                       |--- petal width (cm) <= 1.55
|                           |--- class: 2
|                           |--- petal width (cm) > 1.55
|                               |--- petal length (cm) <= 5.45
|                                   |--- class: 1
|                                   |--- petal length (cm) > 5.45
|                                       |--- class: 2
|           |--- petal width (cm) > 1.75
|               |--- petal length (cm) <= 4.85
|                   |--- sepal width (cm) <= 3.10
|                       |--- class: 2
|                       |--- sepal width (cm) > 3.10
|                           |--- class: 1
|               |--- petal length (cm) > 4.85
|                   |--- class: 2
```

...Program finished with exit code 0

Press ENTER to exit console.

