

do Loop

Example – do Loop

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input:

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input:
sum: 0

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input:
sum: 0

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input:	3
sum:	0

```
int input;  
int sum = 0  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Input:
3

Example – do Loop

input:	3
sum:	3

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input:	3
sum:	3

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```


Example – do Loop

input:	3
sum:	3

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

-30 <= 3 && 3 <= 30
true

Example – do Loop

input:	3
sum:	3

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input: -20
sum: 3

```
int input;  
int sum = 0  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Input:
-20

Example – do Loop

input: -20
sum: -17

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

```
input: -20  
sum:   -17
```

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input: -20
sum: -17

```
int input;  
int sum = 0;  
  
do {  
    std::cin >>  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

-30 <= -20 && -20 <= 30
true

Example – do Loop

```
input: -20  
sum:   -17
```

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input: 32
sum: -17

```
int input;  
int sum = 0  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Input:
32

Example – do Loop

input:	32
sum:	15

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input:	32
sum:	15

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input:	32
sum:	15

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

`-30 <= 32 && 32 <= 30`
`false`

Example – do Loop

input:	32
sum:	15

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Example – do Loop

input:	32
sum:	15

```
int input;  
int sum = 0;  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input <= 30);  
  
std::cout << "Sum: " << sum << "\n";
```

Output:

Sum: 15

Why do and not while?

- Need `input` in `condition`.

```
...  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
...
```

Why do and not while?

- Need `input` in `condition`.
- But: `input` receives value **in body**
⇒ at least one iteration

```
...  
  
do {  
    std::cin >> input;  
    sum += input;  
} while (-30 <= input && input <= 30);  
  
...
```