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Takrorlash operatorlari

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Reja:

- while loop
- for loop
- do-while loop
- Infinite loop
- Amaliy mashqlar

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Takrorlash operatori

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Takrorlash operatorida takrorlash sharti **true** qiymatga teng bo’lganida dasturning ma’lum bir qismidagi operatorlar takror ravishda bajariladi.

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Bu jarayon takrorlash sharti **false** qiymatga teng bo’lgunicha davom etadi.

Bunda takror bajariluvchi dastur qismi **takrorlanish tanasi** deb ataladi.

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while loop

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```
while (condition) {
  // takror bajariluvchi blok
}
```

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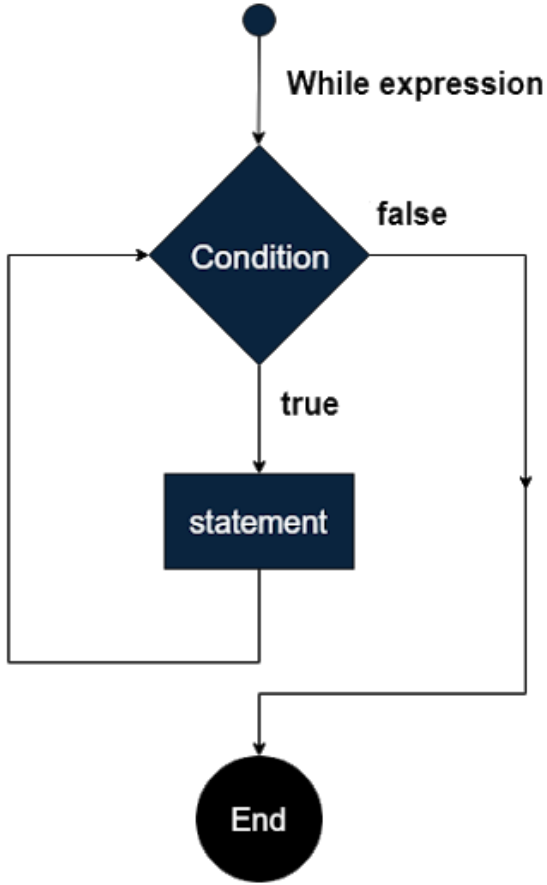

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while - shartni oldindan tekshiruvchi takrorlash operatori hisoblanadi.

Agar takrorlash boshida <*condition*> ***false*** bo‘lsa, **while** operatori tarkibidagi **<statement>** qismi bajarilmaydi.

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```cpp
#include <iostream>

using namespace std;

int main() {
  int i = 0;

  while (i < 5) {
    cout << i << "\n";
    i++;
  }

  return 0;
}
```

```
0
1
2
3
4
```

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for loop

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```
for (statement 1; statement 2; statement 3)
{
  // takror bajariluvchi blok
}
```

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statement 1 (initialization) – faqat takrorlash boshida bir marta ishlovchi qism

statement 2 (condition) – takrorlash sharti

statement 3 (updation) – takrorlash tanasi bajarilgandan so’ng bajariluvchi qism

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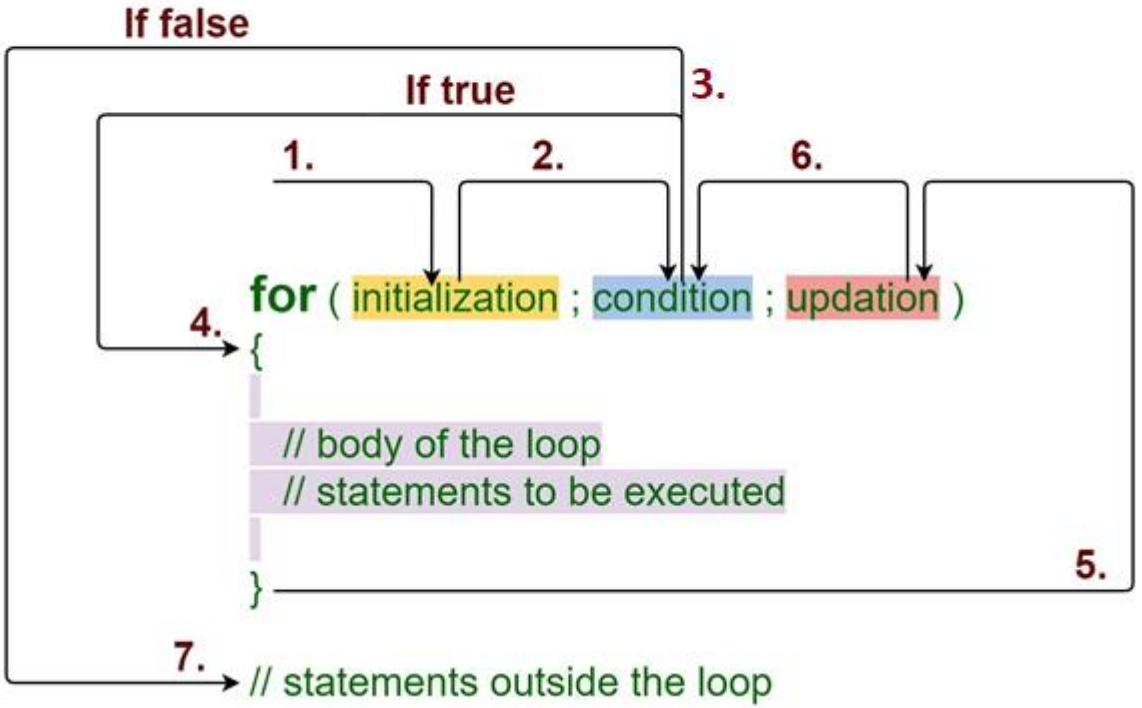
For Loop



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```cpp
#include <iostream>
using namespace std;

int main() {
  for (int i = 0; i < 5; i++) {

    cout << i << "\n";

  }

  return 0;
}
```

```
0
1
2
3
4
```

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do-while loop

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```
do {
  // takror bajariluvchi blok
}
while (condition);
```

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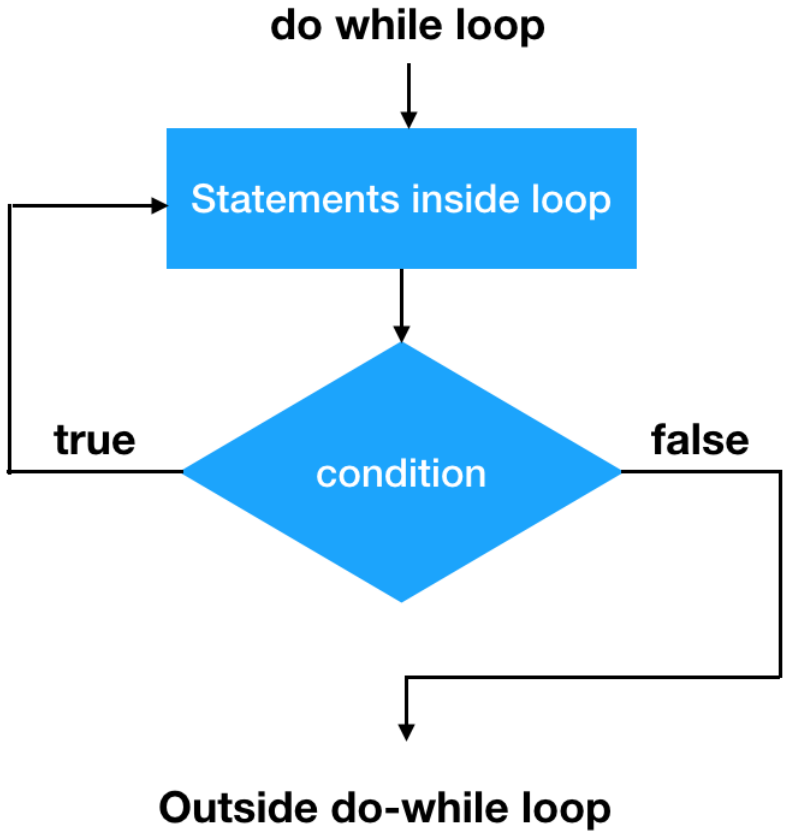

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```cpp
#include <iostream>
using namespace std;

int main() {

  int i = 0;

  do {
    cout << i << "\n";
    i++;
  }
  while (i < 5);

  return 0;
}
```

```
0
1
2
3
4
```

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do-while loop da takrorlanish tanasi kamida 1 marotaba bajariladi.

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```cpp
#include <iostream>
using namespace std;

int main() {

  int i = 10;

  do {
    cout << i << "\n";
    i++;
  }
  while (i < 5);

  return 0;
}
```

```
10
```

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Infinite loop

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```cpp
#include <iostream>
using namespace std;

int main() {

  while (true) {

    cout << "Foundation \n";

  }

  return 0;
}
```

```
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
```

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```cpp
#include <iostream>
using namespace std;

int main() {

  for ( ; true ; ) {

    cout << "Foundation \n";

  }

  return 0;
}
```

```
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
```

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```cpp
#include <iostream>
using namespace std;

int main() {

  for ( ; ; ) {

    cout << "Foundation \n";

  }

  return 0;
}
```

```
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
```

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```cpp
#include <iostream>
using namespace std;

int main() {

  do {

    cout << "Foundation \n";

  }while (true);

  return 0;
}
```

```
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
Foundation
```

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Amaliy mashqlar

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1 dan 10 gacha bo’lgan sonlarni ekranga chiqaring.

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Foydalanuvchi tomonidan kiritilgan songa mos karra jadvalini ekranga chiqaring.

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1 dan 20 gacha bo’lgan juft sonlarni ekranga chiqaring.

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a va b butun sonlari berilgan (a<b). Ular orasidagi butun sonlar yig’indisini toping.

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N natural soni berilgan. Shu sonning natural bo’luvchilarini aniqlang.

Masalan, 30 ning bo’luvchilari: 1, 2, 3, 5, 6, 10, 15, 30

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N natural soni berilgan. Uning mukammal yoki mukammal emasligini aniqlang.

Mukammal sonlar - o‘zidan farqli bo‘luvchilarning yig‘indisiga teng natural sonlar.

Masalan, 6=1+2+3, 28=1+2+4+7+14.

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N natural soni berilgan. Uning raqamlarining yig’indisini hisoblang.

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Foydalanuvchi tomonidan sonlar kiritilaveradi. Bu jarayon 0 kiritilguncha davom etadi. Shu sonlarning eng kattasini toping.

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E`tiboringiz uchun rahmat!