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Takrorlanuvchi algoritmlar

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Reja:

- Takrorlanuvchi jarayonlar haqida
- Takrorlanuvchi algoritm haqida
- Amaliy mashqlar

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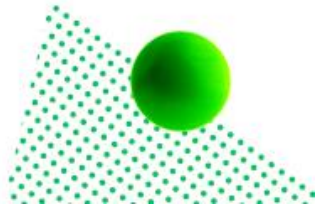
Takrorlanuvchi jarayonlar



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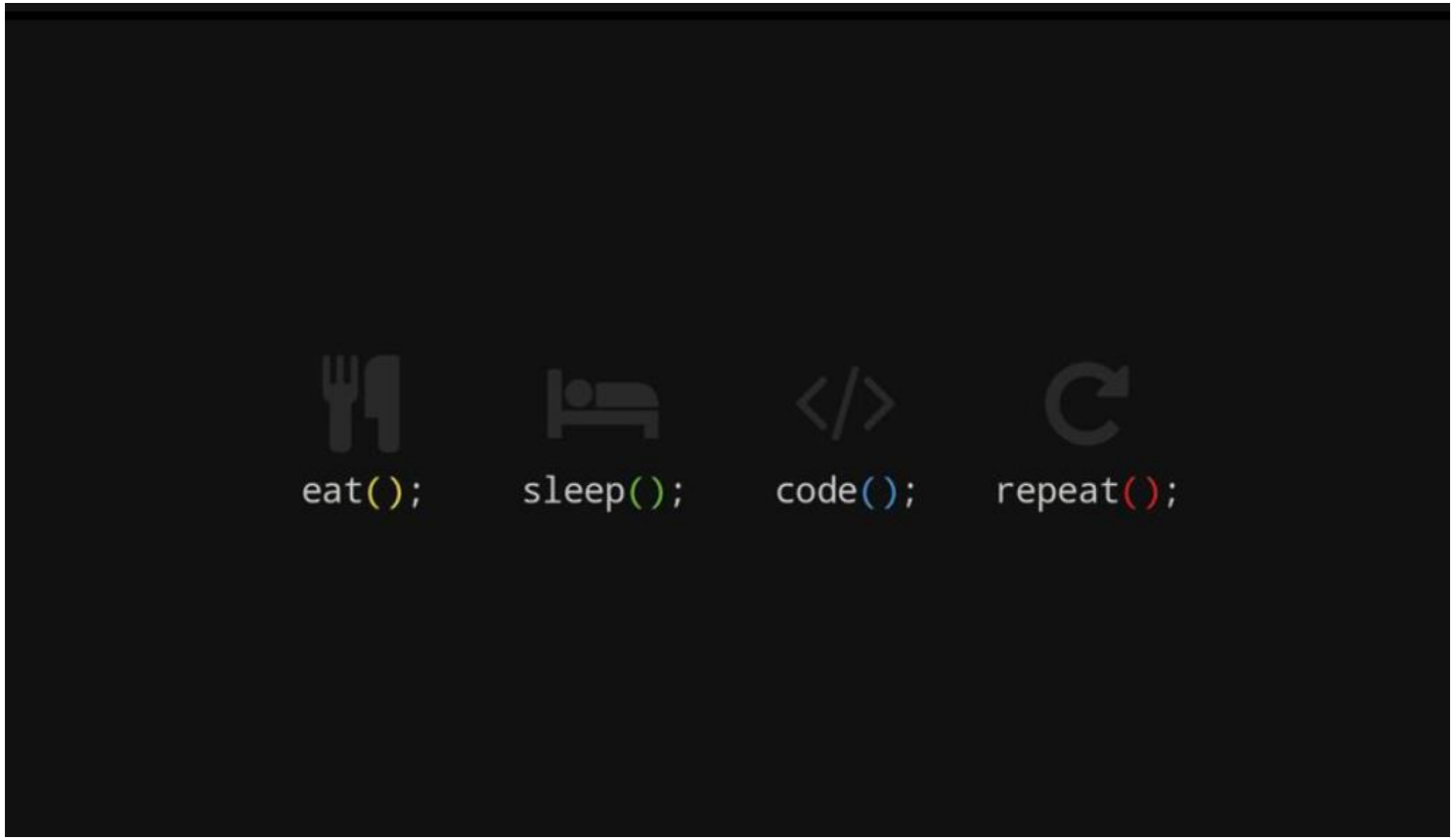

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Takrorlanuvchi algoritm

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Biror masalani yechish uchun bajarilishi zarur bo‘lgan amallar ketma-ketligining ma’lum bir qismi biror parametrga bog‘liq holda bir necha marta takror bajarilsa, bunday algoritm **takrorlanuvchi algoritm** deyiladi.

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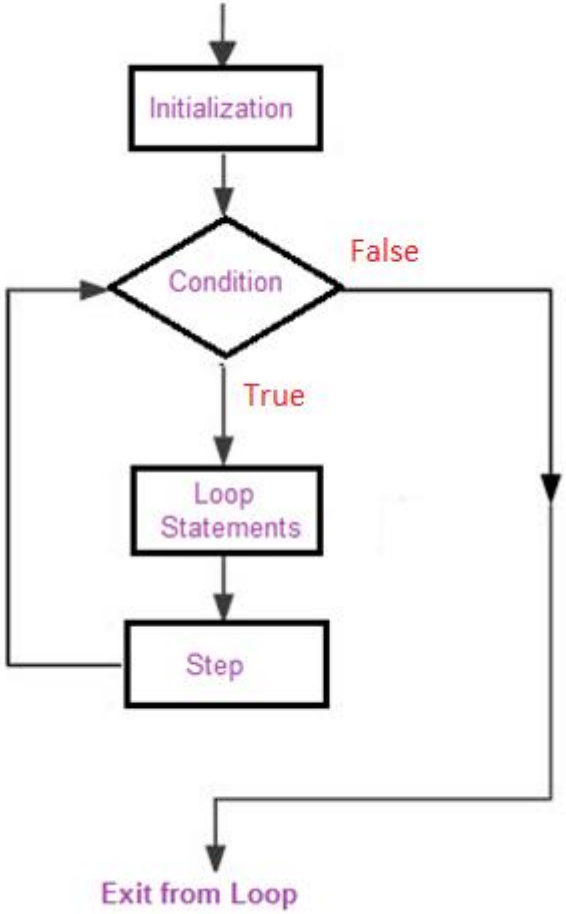

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Misol

1 dan 1000 gacha bo‘lgan sonlar yig'indisini, ya'ni S = 1 + 2 + 3 + ... + 1000 ni hisoblash algoritmini tuzing.

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1) Boshlansin;

2) **S = 0** deb olinsin (ya'ni **S = 0**);

3) i ning qiymati 1 deb olinsin (ya’ni **i = 1**);

4) agar i <= 1000 bo‘lsa 5-bandga o'tilsin, aks holda 7-bandga o’tilsin;

5) S ga i qo'shilib, S deb olinsin (ya'ni **S = S + i**);

6) i ga 1 qo'shilib, i deb olinsin (ya’ni **i = i + 1**); 4-bandga o’tilsin;

7) javob deb S olinsin;

8) tugallansin.

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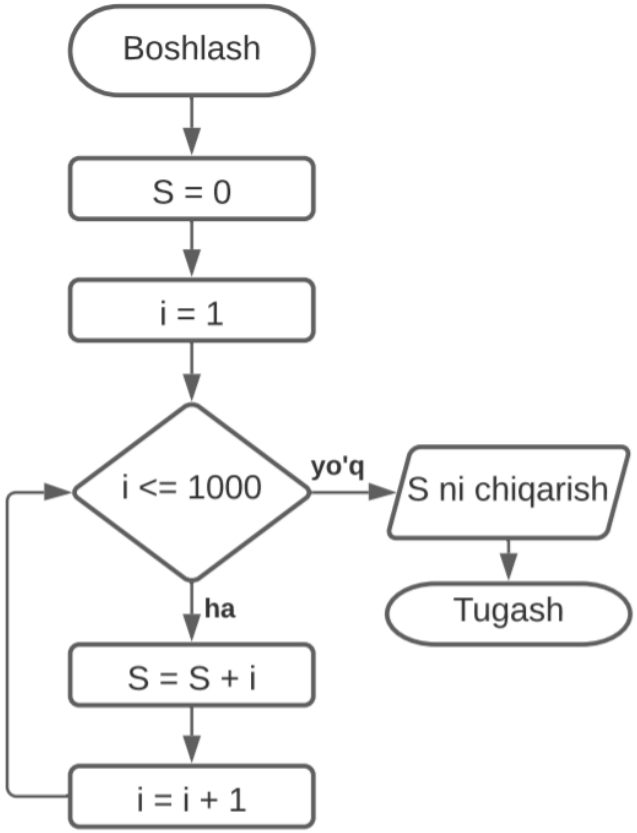

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1- qadam: I = 1 bo‘lsin:

S = S + 1 = 0 + 1 = 1

2- qadam: I = I + 1 = 1 + 1 = 2 bo’ladi:

S = S + I = 1 + 2 = 3

3- qadam: I = I + 1 = 2 + I = 3 bo’ladi:

S = S + I = 3 + 3 = 6

4- qadam: I = I + 1 = 3 + 1 = 4 bo’ladi:

S = S + I = 6 + 4 = 10

...

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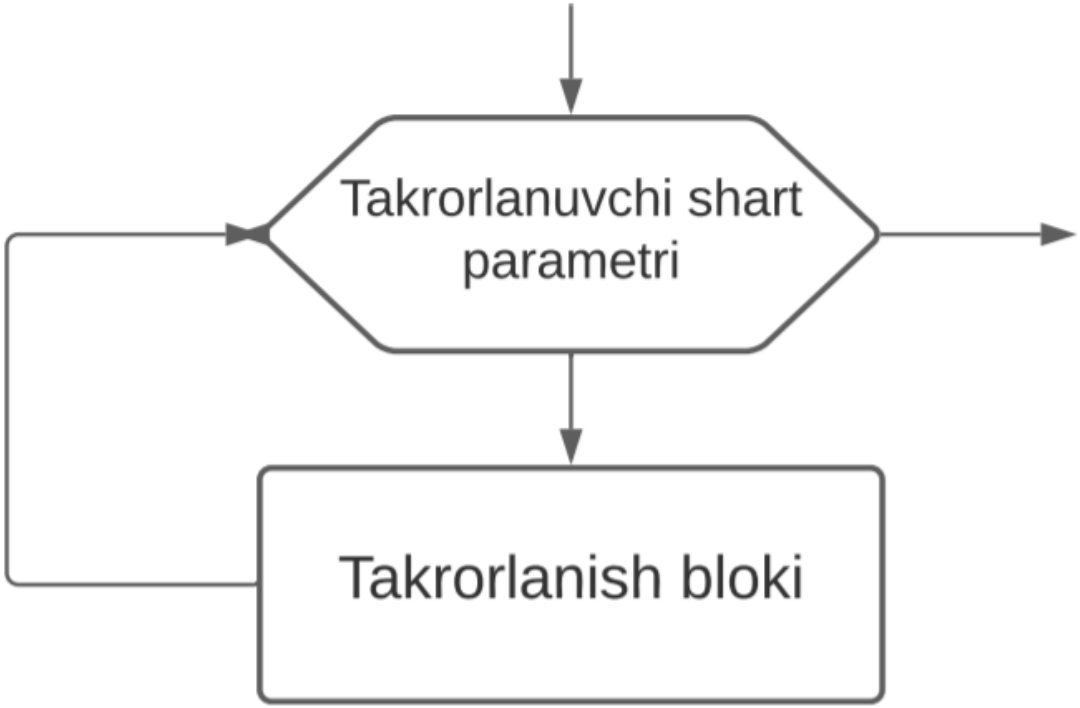

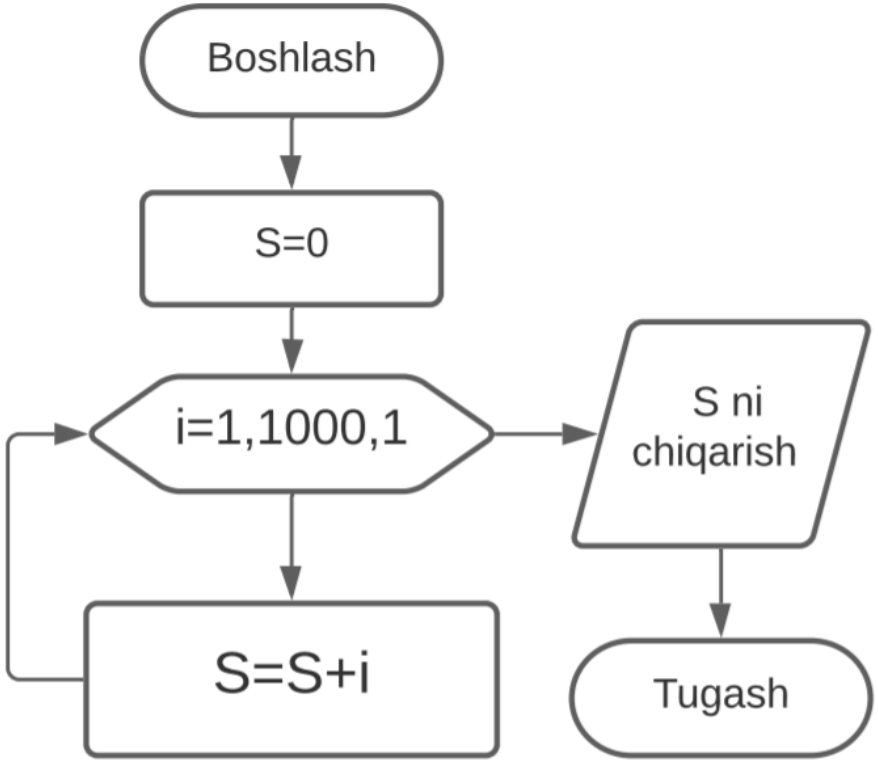
Boshlash
S=0
i=1,1000,1
S ni chiqarish
S=S+i
Tugash

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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!