keyword
initialization
Statement
Conditional
expression
update
statement

```cpp
for (int i=0;i<5;i++) {
    cout << i << endl;
}
```

1. Initialize
2. Check condition
3. If condition is true
   a. Run body
   b. Run update
   c. Go back to step 2

$i++$

$i = i + 1$

Stack Diagram

main

x   `4`

a   `2|4|6|8|10`

b   `•` → `| | | |`