

Flow of Control and Programming

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CSC201 Section 002

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Visual Studio Demo

While Statements

```
"while cond do x1"
```

- is equivalent to

```
"while1:  
    if !(cond) goto out1  
    x1  
    goto while1  
out1:..."
```

In SASM

- C:

```
while (a < b)
    a = a * a
```

- SASM:

```
while1:
    compare a,b
    bgez out1
    imult a,a
    br while1
out1: ...
```

For Statements

```
"for (initialization; cond; update) do x1"
```

- is equivalent to

```
"initialization  
fortop:  
    x1  
    update  
    if (cond) goto fortop  
out2: ... "
```

In SASM

- C:

```
for (i1 = 0; i1 < 10; i1++)  
    putchar(c1);
```

- SASM:

```
move i1, 0  
fortop:  
    put_ch c1  
    iadd i1, 1  
    compare i1, 10  
    blz fortop  
  
out2: ...
```