Mini C

PuC - Mini C

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Ziel

Was ist das Ziel?
C Ähnlichen Code Kompilieren und ausführen

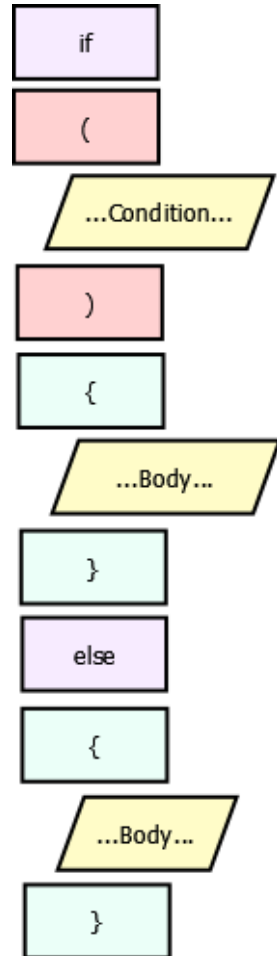| Wie Lösen wir das?	
Aus dem Unterricht bekannte Elemente	Lexer, Parser, Evaluator, …

Lexer

```
int F(int §n){

    if(§n == 0 || §n == 1){
        return §n;
    }else{
        return F(§n - 1) + F(§n - 2)
    }

}

int Main(int §b)
{
    return F(§b);
}
```
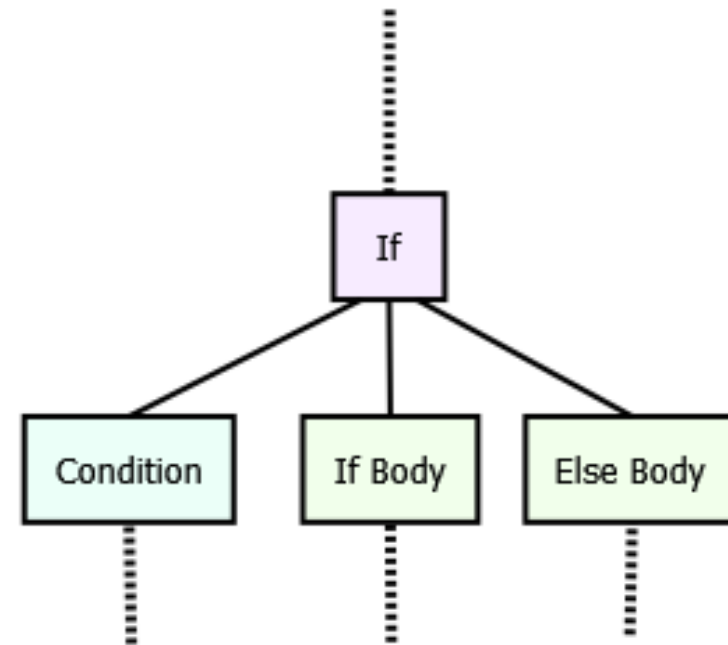
Token →

- Keywords (If,While, ...)
- Symbols (=, ; , ...)
- Operatoren (+, -, ==, ...)
- Literals (Number, Bool, Char)
- Control Token (EOF)

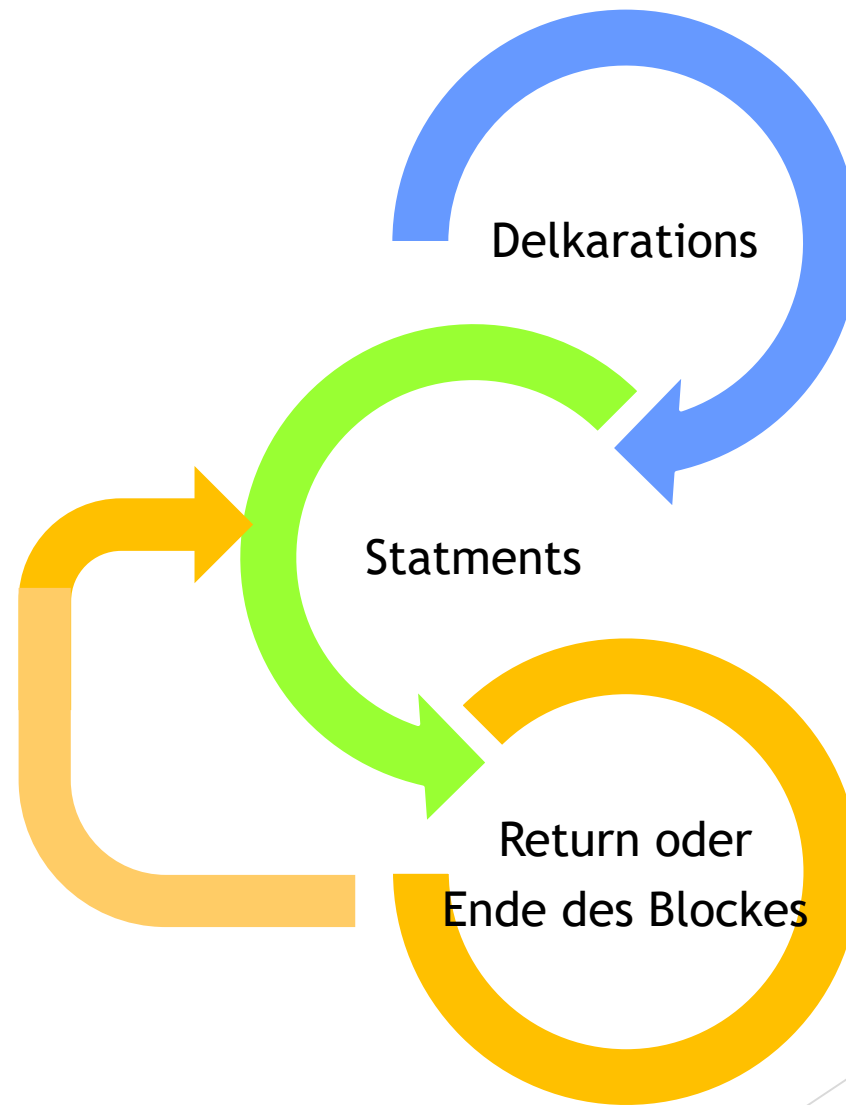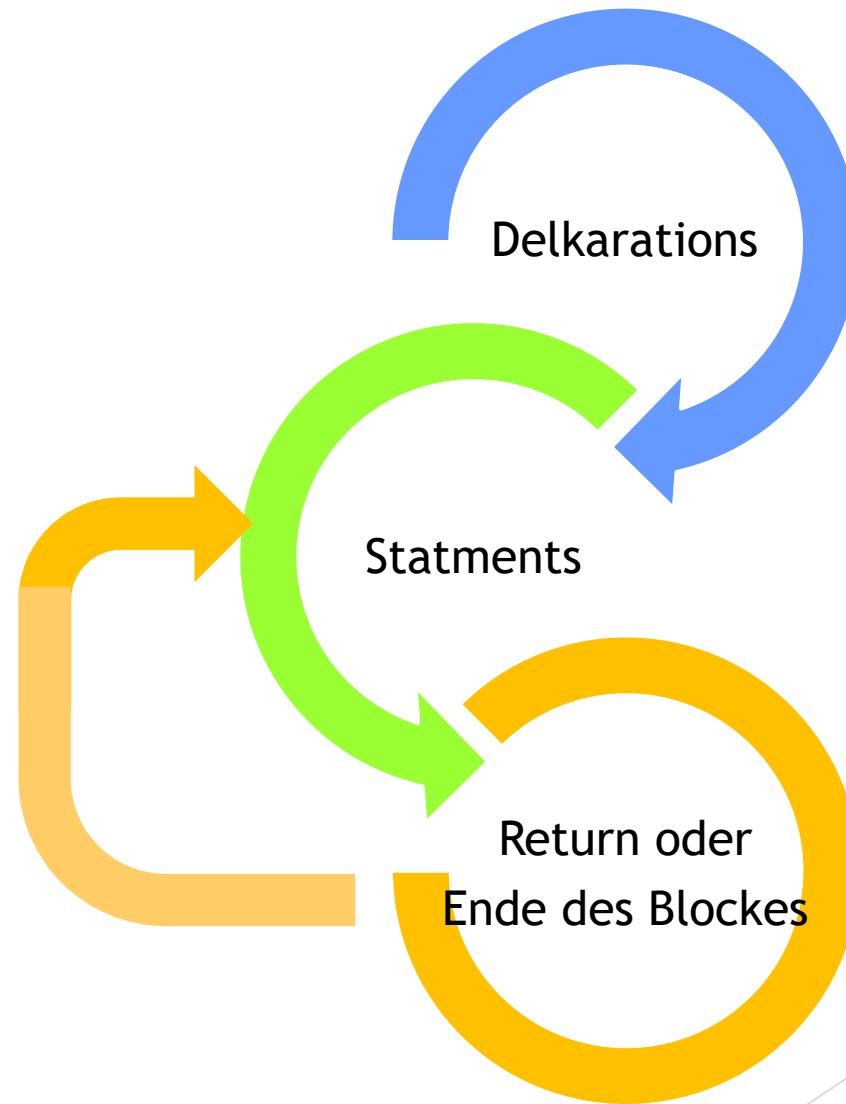# Parser

Ergebnis Tokens aus dem Lexer

Baum-Strucktur

Evaluator

Evaluator

```
int Main()
{
    int §a = 1;
    int §b = §a * 2;

    §b = §b + §b;
    Println(§b);

    {
        int §a = §a + §a;

        Println(§a);
        Println(§b);
    }

    return §a;
}
```

Delkarations

Statments

Return oder
Ende des Blockes

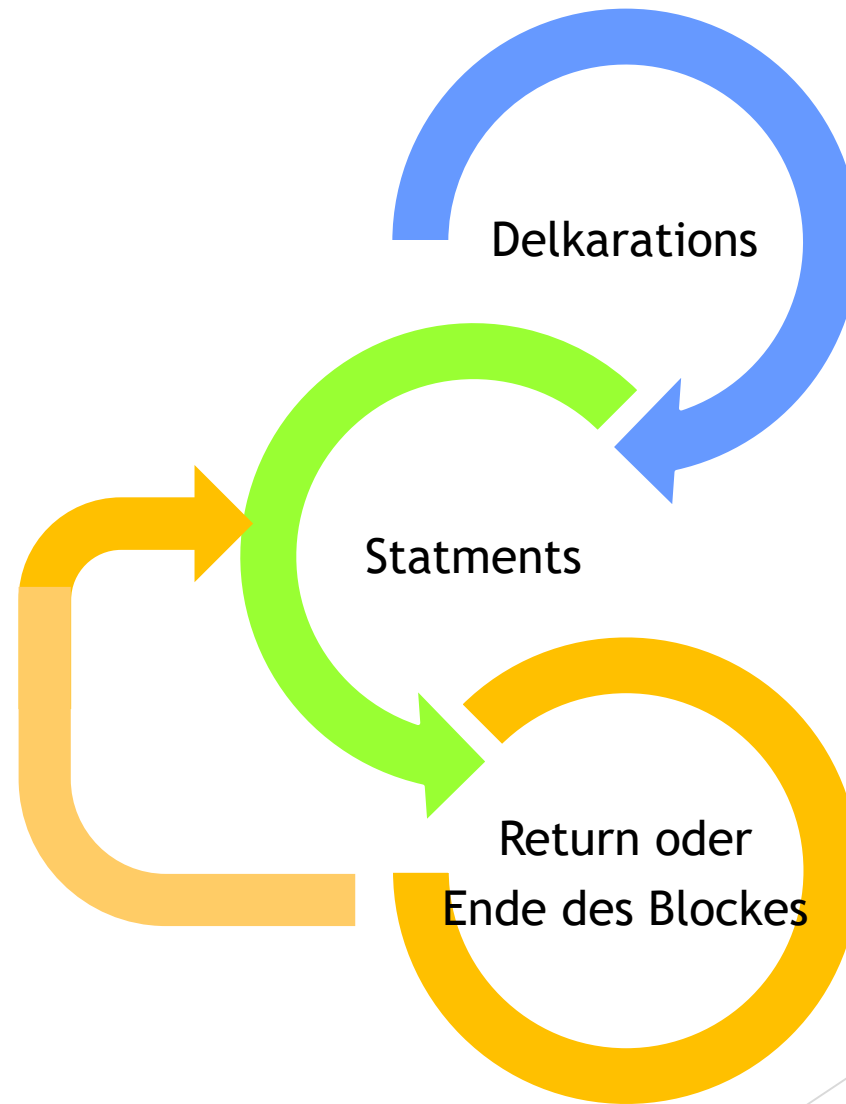# Evaluator

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        int §a = §a + §a;

        Println(§a);
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    }

    return §a;
}
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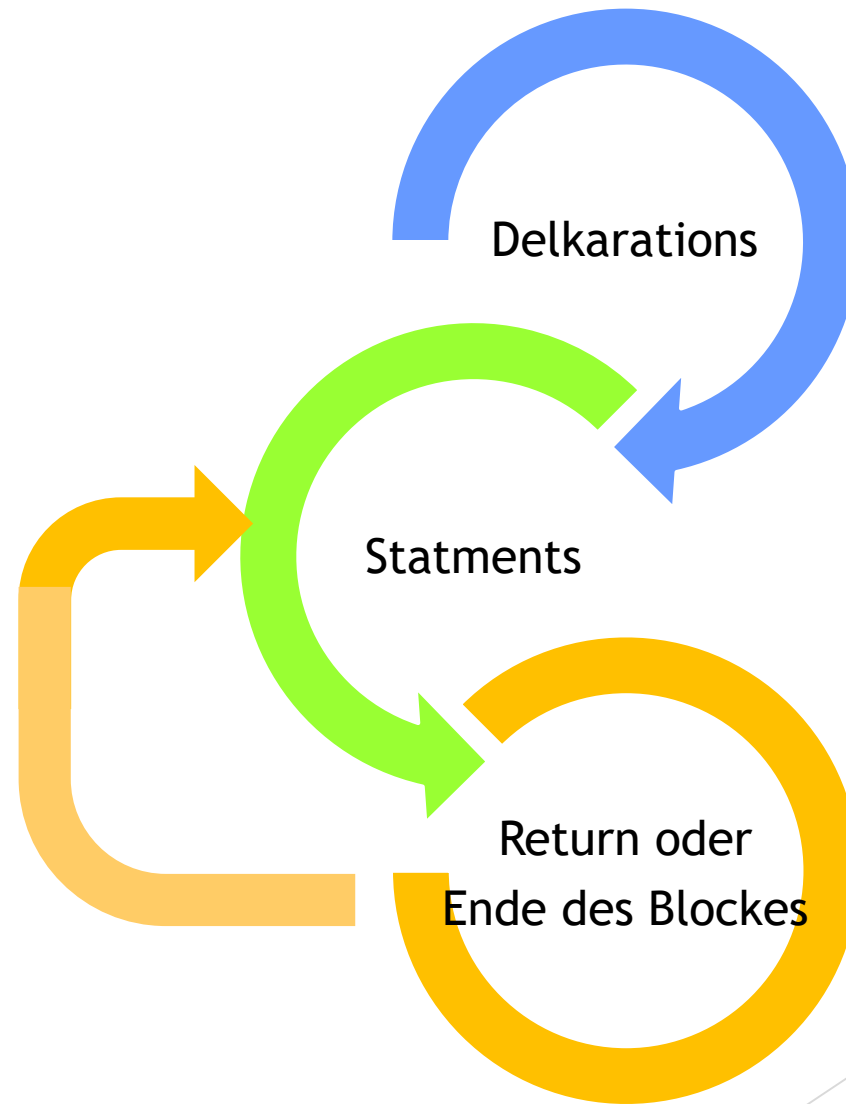
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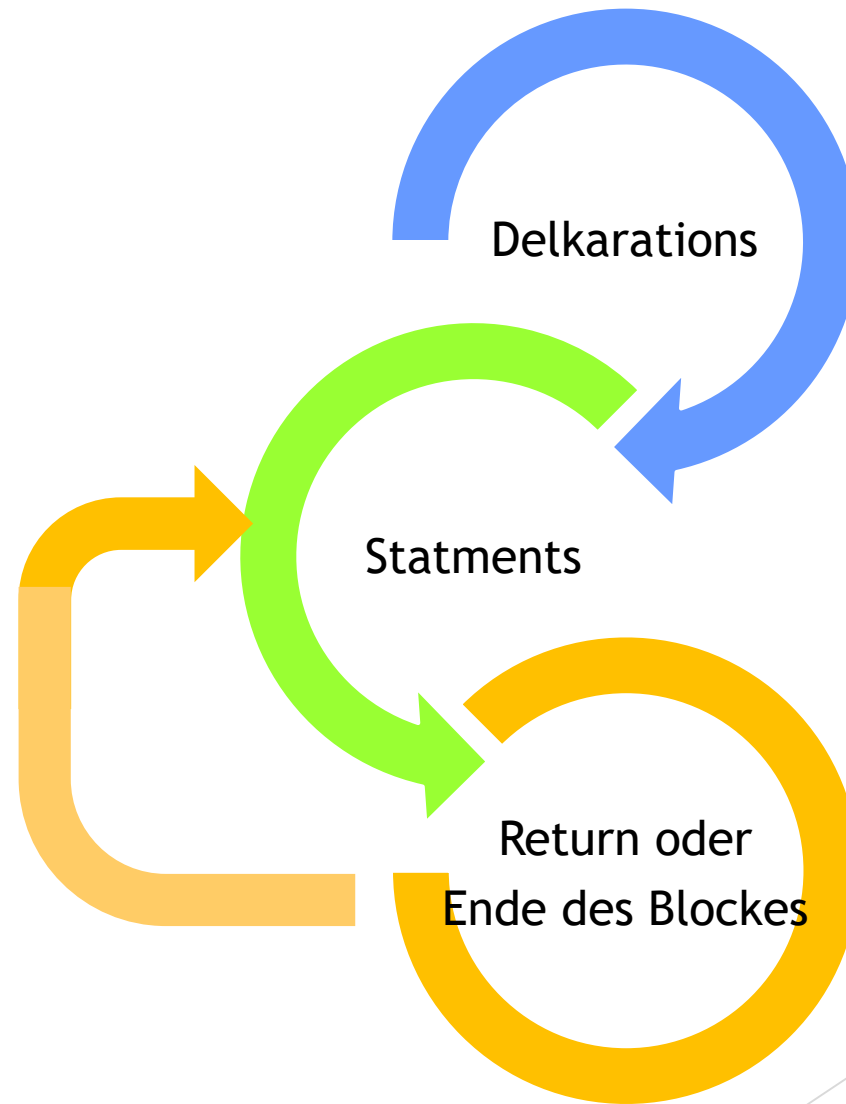
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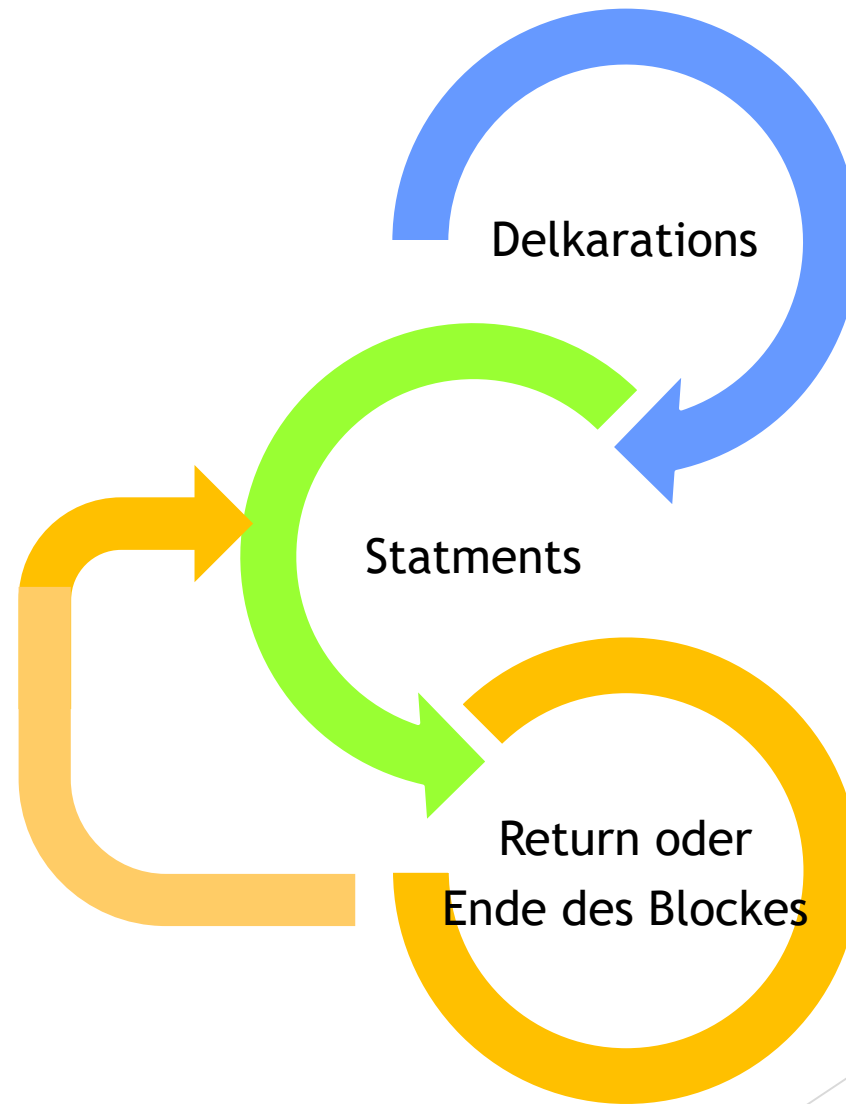
Delkarations

Statments

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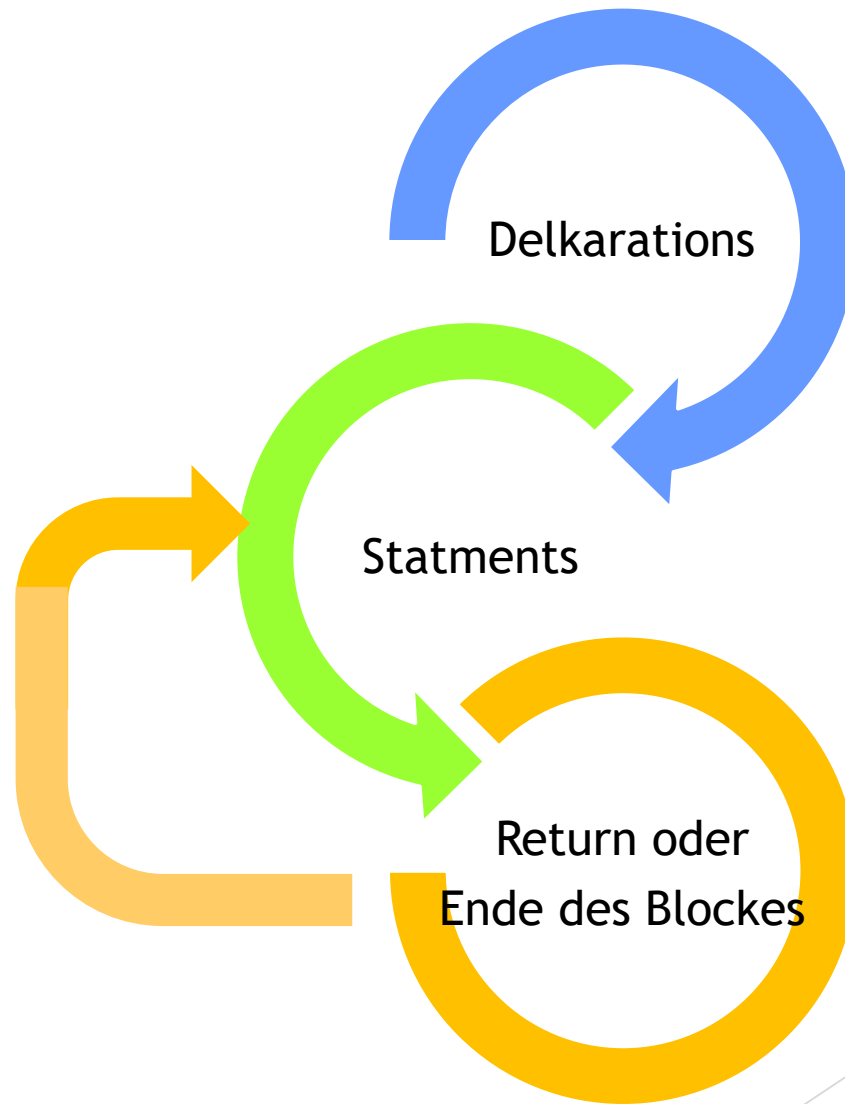# Evaluator

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    §b = §b + §b;
    Println(§b);

    {
        int §a = §a + §a;

        Println(§a);
        Println(§b);
    }


    return §a;
}
```

Typechecker

```
int Main(int §a)
{
    bool §b = 5 + §a == 7;

    return §b;
}
```

Typechecker

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}
```

ShowCase...

Vielen Dank für ihre Aufmerksamkeit

Link zum Repository: https://github.com/DennisGoss99/PuC_Praktikum_C--