COMP2021

Project Design Review

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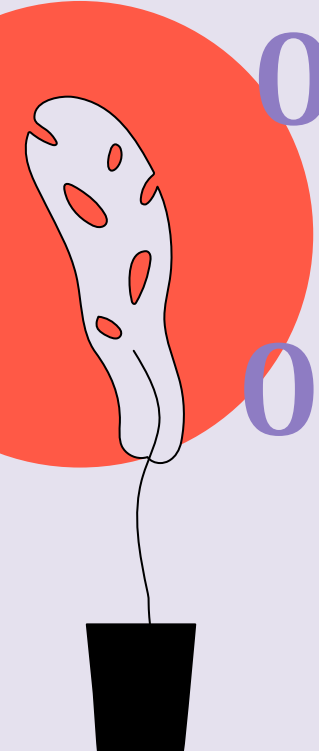
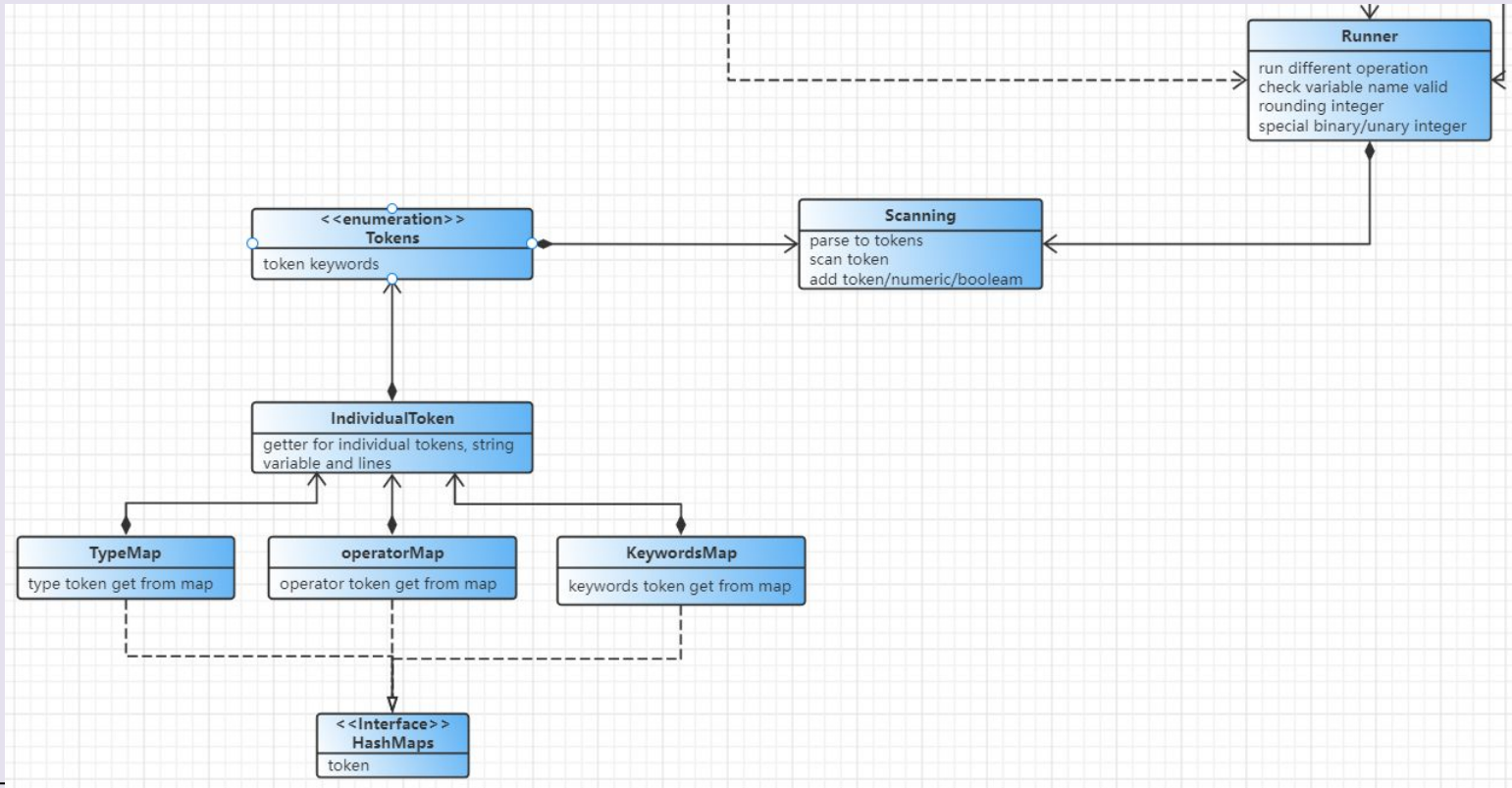# Major Parts

1 Scanning
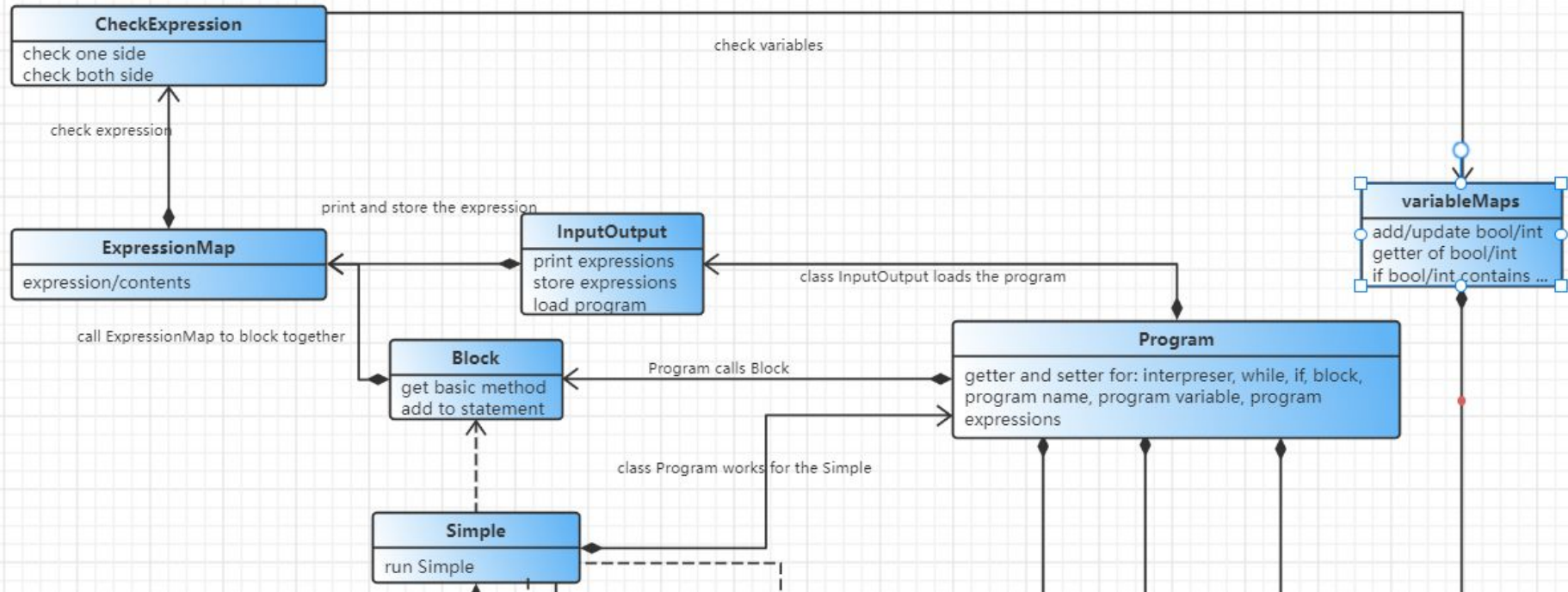
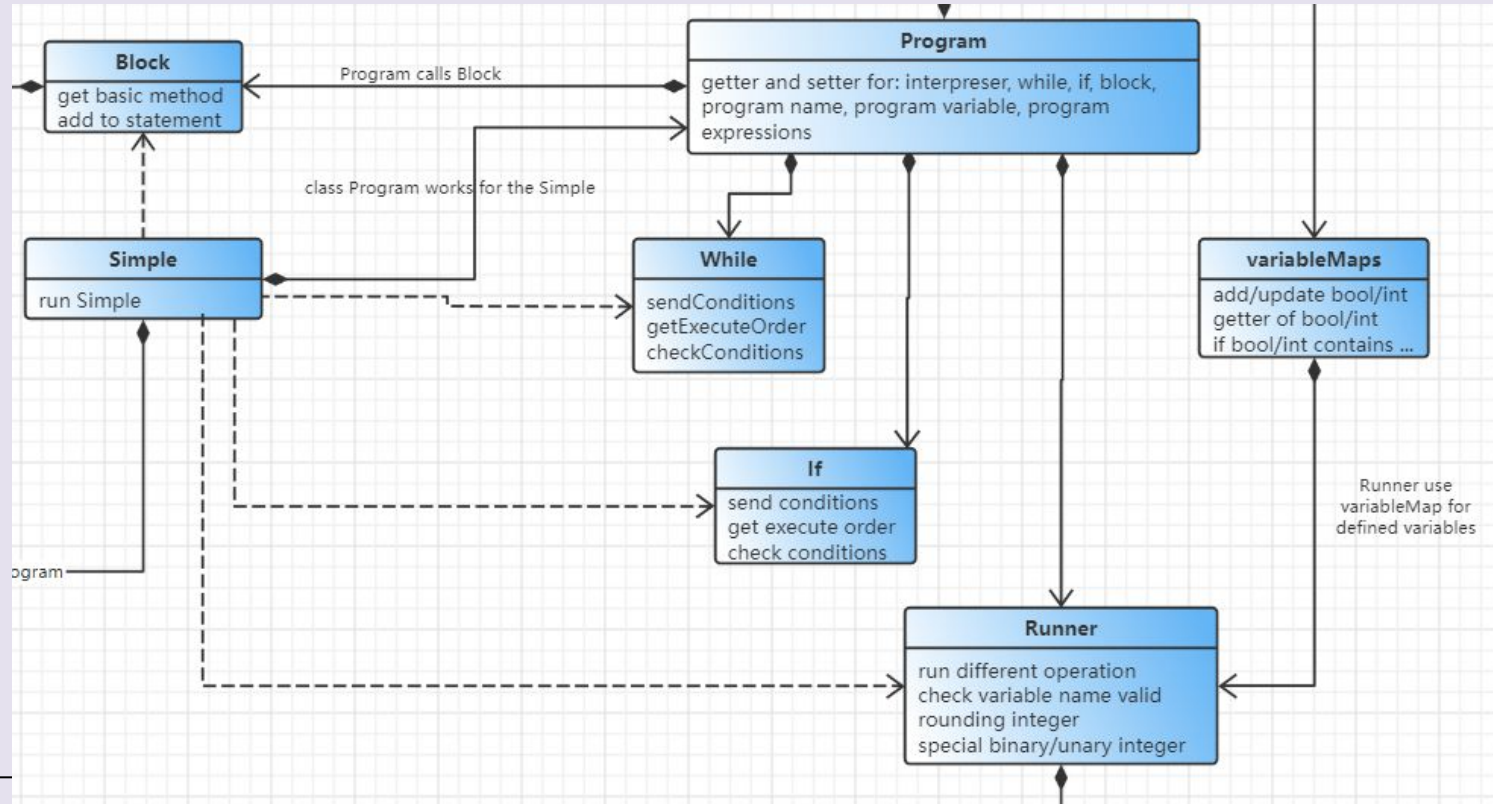2. Program and Expression

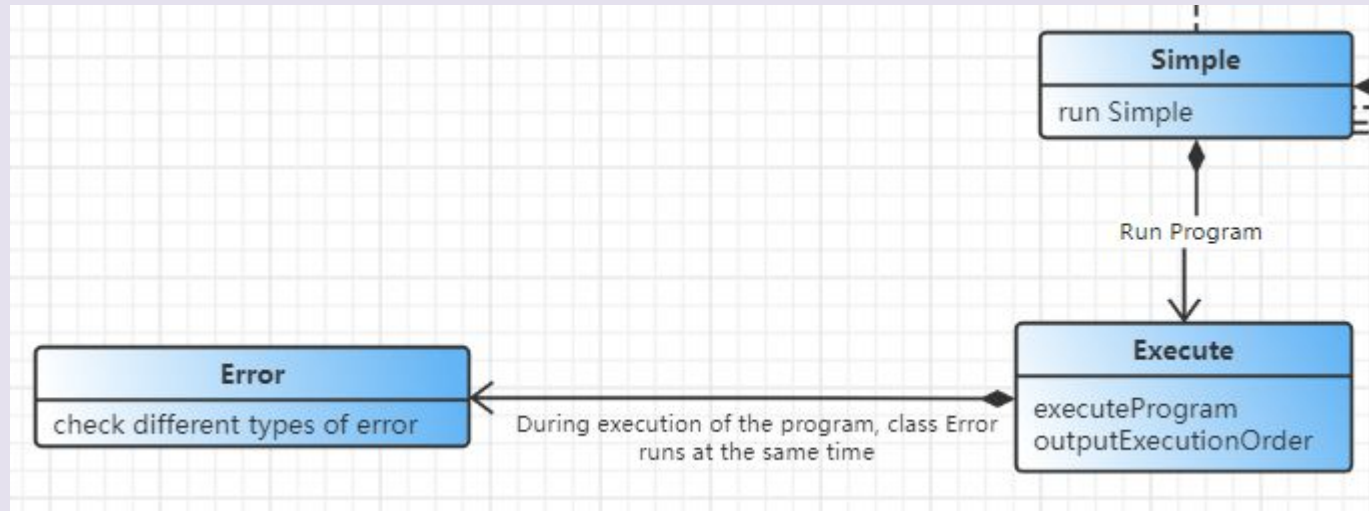3 Program and Execution

4 Error

Scanning

Program, Expression

Classes between Simple & Program

Execute and Check Errors

02

Design Choice

Inheritance

- Retain similar implementation
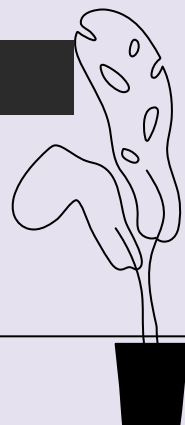
- Code-reusability, time saving

Inheritance In Our Program

In Error:

```
public class Error extends RuntimeException{
```

In KeywordsMap:

```
public class KeywordsMap implements HashMaps {
```

Polymorphism

- Single symbol to present multiple different types

- Each type provide its own independent implementation

Polymorphism In Our Program

In IndividualToken:

- Overriding method equals() to compare

In addToken:

- Overloading method

Polymorphism In Our Program

In addToken:

```
private void addToken(Tokens type, Object literal, String inputString,List<IndividualToken> tokenList){
```

- For user-defined various expression names

```
private void addToken(Tokens type, String inputString,List<IndividualToken> tokenList){
```

- For user-defined various variable names

03

Reusability /Scalability

Reusability

- Re-used through inheritance, polymorphism and information hiding. Team does not have to write same code multiple times.

Classes If, While, Block, Runner Used from time to time by class Program

Scalability

- Ability of our code to cope with future change in requirements
- If we add more java classes, the system will realize more operations and functions.

Thanks!