# Documentation

## 11.10.2023 Prog. Tech. Assignment 1

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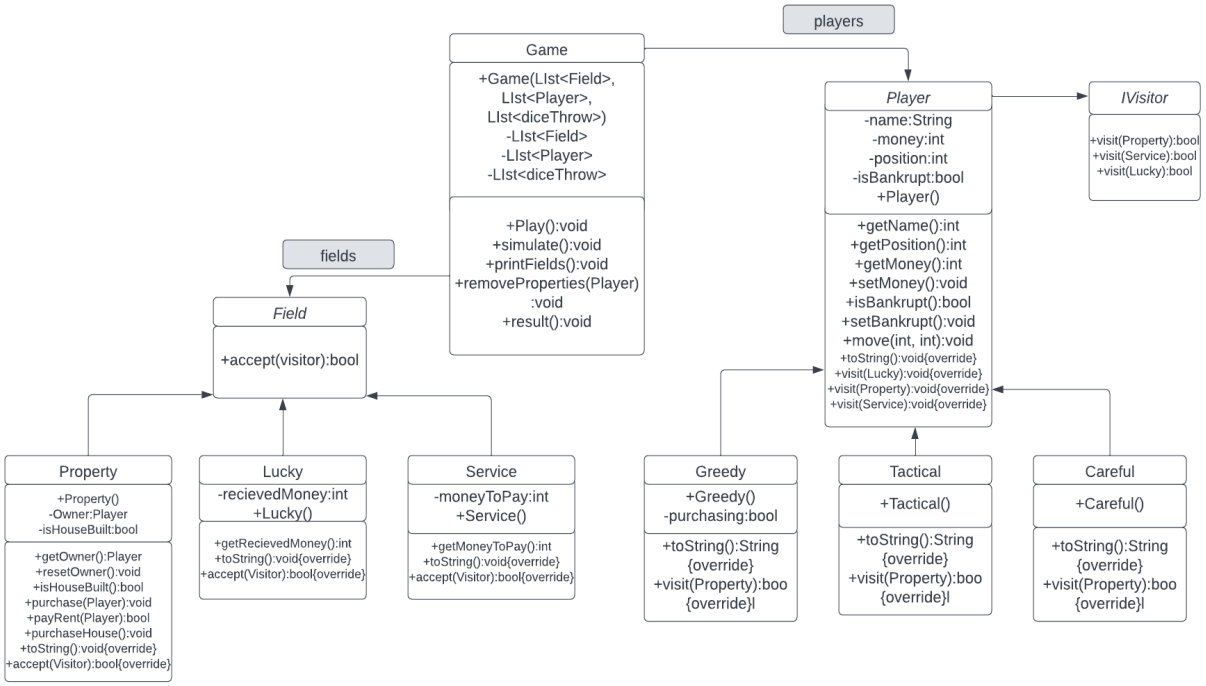
### Task 4

Simulate a simplified Capitaly game. There are some players with different strategies, and a cyclical board with several fields. Players can move around the board, by moving forward with the amount they rolled with a dice. A field can be a property, service, or lucky field. A property can be bought for 1000, and stepping on it the next time the player can build a house on it for 4000. If a player steps on a property field which is owned by somebody else, the player should pay to the owner 500, if there is no house on the field, or 2000, if there is a house on it. Stepping on a service field, the player should pay to the bank (the amount of money is a parameter of the field). Stepping on a lucky field, the player gets some money (the amount is defined as a parameter of the field). There are three different kind of strategies exist. Initially, every player has 10000. Greedy player: If he steps on an unowned property, or his own property without a house, he starts buying it, if he has enough money for it. Careful player: he buys in a round only for at most half the amount of his money. Tactical player: he skips each second chance when he could buy. If a player has to pay, but he runs out of money because of this, he loses. In this case, his properties are lost, and become free to buy. Read the parameters of the game from a text file. This file defines the number of fields, and then defines them. We know about all fields: the type. If a field is a service or lucky field, the cost of it is also defined. After the these parameters, the file tells the number of the players, and then enumerates the players with their names and strategies. In order to prepare the program for testing, make it possible to the program to read the roll dices from the file. Print out which player won the game, and how rich he is (balance, owned properties).

### Diagram



## Tests

**Input:**

```
6
Property
Property
Service 1000
Lucky 300
Property
Property
2
Mike Tactical
Olha Greedy
6
1
2
3
4
5
6
```

**Output:**

```
Mike WON!!!
Mike's budget is 900
Properties of the winner:
(1)Property [Owner: Mike]
```

**Input:**

```
8
Property
Property
Service 5000
Lucky 100
Property
Property
Service 1500
Lucky 300
4
Anton Greedy
Anatoliy Careful
Max Tactical
Draxler Greedy
8
1
2
3
4
5
6
7
8
```

**Output:**

```
Max WON!!!
Max's budget is 5000
Properties of the winner:
(5)Property [Owner: Max]
```

**Input:**

```
5
Property
Property
Service 2000
Lucky 500
Property
4
Dima Greedy
Alex Tactical
Patric Careful
Alina Greedy
5
1
2
3
4
5
```

**Output:**

```
Dima WON!!!
Dima's budget is 6000
Properties of the winner:
(0)Property [Owner: Dima]
(1)Property [Owner: Dima]
```

**Input:**

```
7
Property
Property
```

```
Service 3000
Lucky 1000
Property
Property
Service 2500
3
Mariia Careful
Anastasiia Greedy
Angelina Tactical
7
1
2
3
4
5
6
7
```

**Output:**

```
Mariia WON!!!
Mariia's budget is 2500
Properties of the winner:
(0)Property [Owner: Mariia]
(1)Property [Owner: Mariia]
```

**Input file has a wring name or does not exist:**
**Output:**

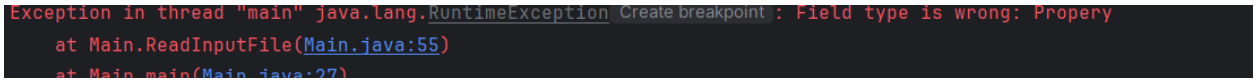
```
FILE WASN'T FOUND

Process finished with exit code 0
```

**Input file contains an error in the field's name (3rd row):**

```
6
Property
Propery
Service 1000
Lucky 300
Property
Property
2
Mike Tactical
Olha Greedy
6
1
2
3
4
5
6
```

**Output:**


Exception in thread "main" java.lang.RuntimeException Create breakpoint : Field type is wrong: Propery
at Main.ReadInputFile(Main.java:55)