

과제 풀이

GuessGame

Ver. 1

# GuessNoGamePlayer.java

```
public class GuessNoGamePlayer {  
    int myNumber = (int) (Math.random() * 10);  
    int guessNumber = 0;  
  
    public void guess() {  
        guessNumber = (int) (Math.random() * 10);  
        System.out.println("추정한 값 : " + guessNumber);  
    }  
}
```

# GuessGame.java (1)

```
public class GuessGame {  
    GuessNoGamePlayer human;  
    GuessNoGamePlayer computer;  
  
    public void runGame() {  
        human = new GuessNoGamePlayer();  
        computer = new GuessNoGamePlayer();  
  
        boolean hWin = false;  
        boolean cWin = false;  
  
        System.out.println("Game을 시작합니다.");  
    }  
}
```

# GuessGame.java (2)

```
while (!hWin && !cWin) {
    System.out.print("인간이 ");
    human.guess();
    if (human.guessNumber == computer.myNumber) {
        hWin = true;
        System.out.println("인간이 맞추었습니다!!!");
    }

    System.out.print("컴퓨터가 ");
    computer.guess();
    if (computer.guessNumber == human.myNumber) {
        cWin = true;
        System.out.println("컴퓨터가 맞추었습니다!!!");
    }
}
```

# GuessGame.java (3)

```
if (hWin && cWin) {
    System.out.println("게임은 비겼습니다.");
}
else if (hWin) {
    System.out.println("인간이 이겼습니다.");
}
else if (cWin) {
    System.out.println("컴퓨터가 이겼습니다.");
}
}
}
```

# TestdriveGuessGame.java

```
public class TestdriveGuessGame {  
    public static void main(String[] args) {  
        GuessGame game = new GuessGame();  
        game.runGame();  
    }  
}
```

# 과제 풀이

GuessGame

Ver. 2

# ReadInteger.java

```
public class ReadInteger {
    static int readInt() throws java.io.IOException{
        char ch;
        int n = 0;

        // skip non-digit characters
        while (!Character.isDigit(ch = (char) System.in.read()))
            ;

        do {
            n = n * 10 + (ch - '0');
            ch = (char) System.in.read();
        } while (Character.isDigit(ch));

        return n;
    }
}
```



# GuessNoGamePlayer.java

```
public class GuessNoGamePlayer {
    final int MIN_NO = 0;
    final int MAX_NO = 9;

    int myNumber;
    int guessNumber;

    public GuessNoGamePlayer() {
        myNumber = (int) (Math.random() *
            (MAX_NO - MIN_NO + 1) + MIN_NO);
    }

    public void guess() {
        guessNumber = (int) (Math.random() *
            (MAX_NO - MIN_NO + 1) + MIN_NO);
        System.out.println("추정한 값 : " + guessNumber);
    }
}
```

# GuessNoGameHPlayer.java (1)

```
public class GuessNoGameHPlayer extends GuessNoGamePlayer {
    public void guess() {
        System.out.print("Guess number (" +
            MIN_NO + " ~ " + MAX_NO + ") : ");

        try {
            guessNumber = ReadInteger.readInt();
        } catch (java.io.IOException ex) {
            System.out.println("IO Error");
        }
    }
}
```

# GuessNoGameHPlayer.java (2)

```
public void setMyNumber() {  
  
    do {  
  
        System.out.print("Set your number (" + MIN_NO +  
            " ~ " + MAX_NO + ") : ");  
  
        try {  
            myNumber = ReadInteger.readInt();  
        } catch (java.io.IOException ex) {  
            System.out.println("IO Error");  
        }  
    } while (myNumber < MIN_NO || myNumber > MAX_NO);  
}  
}
```

# GuessGame.java (1)

```
public class GuessGame {  
    GuessNoGameHPlayer human;  
    GuessNoGamePlayer computer;  
  
    public void runGame() {  
        human = new GuessNoGameHPlayer();  
        computer = new GuessNoGamePlayer();  
  
        boolean hWin = false;  
        boolean cWin = false;  
  
        System.out.println("Game을 시작합니다.");  
  
        human.setMyNumber();  
    }  
}
```

# GuessGame.java (2)

```
while (!hWin && !cWin) {
    human.guess();
    if (human.guessNumber == computer.myNumber) {
        hWin = true;
        System.out.println("인간이 맞추었습니다!!!");
    }
    computer.guess();
    if (computer.guessNumber == human.myNumber) {
        cWin = true;
        System.out.println("컴퓨터가 맞추었습니다!!!");
    }
}

if (hWin && cWin) {
    System.out.println("게임은 비겼습니다.");
}
else if (hWin) {
    System.out.println("사람이 이겼습니다.");
}
else if (cWin) {
    System.out.println("컴퓨터가 이겼습니다.");
}
}
```

# TestdriveGuessGame.java

```
public class TestdriveGuessGame {  
    public static void main(String[] args) {  
        GuessGame game = new GuessGame();  
        game.runGame();  
    }  
}
```

# 과제 풀이

GuessGame

Ver. 3

# 앞으로 개선할 점

- Guess 과정
  - 한번 추정한 값은 배제시켜야
  - How ?
- 사용자 인터페이스
  - GUI