

# 1 Answers

## 1.1 Written

1. 

```
int board [] [] = new int [4][4];
```
2. 

```
for (int row = 0; row < board.length; row++)  
    for (int col = 0; col < board[row].length; col++)  
        board[row][col] = 1;
```
3. 

```
board[0][1] = 2;
```
4. 

```
for (int row = 0; row < board.length; row++){  
    for (int col = 0; col < board[row].length; col++)  
        System.out.print(board[row][col]);  
        System.out.println(); //added for spacing  
}
```
5. 

```
Student student0 = new Student ("007", "James Bond");
```
6. 

```
Student student1 = new Student ("008", "Jr Bond");
```
7. 

```
Student [] OverAchievers = student0, student1;
```
8. 

```
PrintWriter writer = new PrintWriter (new File ("out.txt"));
```
9. 

```
Scanner reader = new Scanner (new File("in.txt"));
```
10. 

```
Scanner keys = new Scanner (System.in);
```
11. 

```
if (year == 1970)  
    System.out.println("history is cool");  
else if (year == 1980)  
    System.out.println("Era of Hippies!");  
else if (year == 1990)  
    System.out.println("Cassette Tapes!");  
else if (year == 2000)  
    System.out.println("iPhone's begin their take over...");  
else if (year == 2010)  
    System.out.println("US wished Queen Elizabeth II happy birthday on  
        the wrong day, good start to the decade...");  
else  
    System.out.println("Huh, I'm not sure what to say");
```
12. 

```
switch (year){  
case 1970: System.out.println("history is cool"); break;  
case 1980: System.out.println ("Era of Hippies!"); break;  
case 1990: System.out.println("Cassette Tapes!"); break;  
case 2000: System.out.println ("iPhone's begin their take over...");  
        break;  
case 2010: System.out.println ("US wished Queen Elizabeth II happy  
        birthday on the wrong day, good start to the decade..."); break;  
default: System.out.println ("Huh, I'm not sure what to say"); break;
```
13. Roses are red, violets are blue,...
14. ar

## 1.2 Tracing

```
//1
Make: Ford Model: Coupe Year: 1936 Nickname: Doc Hudson Mileage: 150000.0
//2
1950
//3
Lightning McQueen
Tow Mater
Doc Hudson
Mack
//4
```

- Missing "new File" part of Scanner declaration. Should be `Scanner reader = new Scanner (new File (fileName));`.
- Missing extra `reader.nextLine();` call after `int numCars = reader.nextInt();`
- For loop goes one iteration too long (should either be `for (int i = 0; i < carArray.length; i++)` or `for (int i = 0; i <= carArray.length -1; i++)`).
- Missing extra `reader.nextLine();` call after `int year = reader.nextInt();`
- Missing extra `reader.nextLine();` call after `double miles = reader.nextDouble();`
- Missing `nickName` part of the Car object declaration. Should be `carArray[i] = new Car (make, model, year, nickName, miles);` Can think of constructors as contracts, to make an object it have/give every variable in the parameter.
- Didn't close `writer`, so my file was never written.

Contents of out.txt:

```
1: Make: Chevy Model: Camaro Year: 2013 Nickname: Lightning McQueen Mileage: 15000.0
2: Make: Ford Model: F150 Year: 1950 Nickname: Tow Mater Mileage: 200000.0
3: Make: Ford Model: Coupe Year: 1936 Nickname: Doc Hudson Mileage: 150000.0
4: Make: Mack Model: Flintstone Year: 1980 Nickname: Mack Mileage: 100000.0
```