

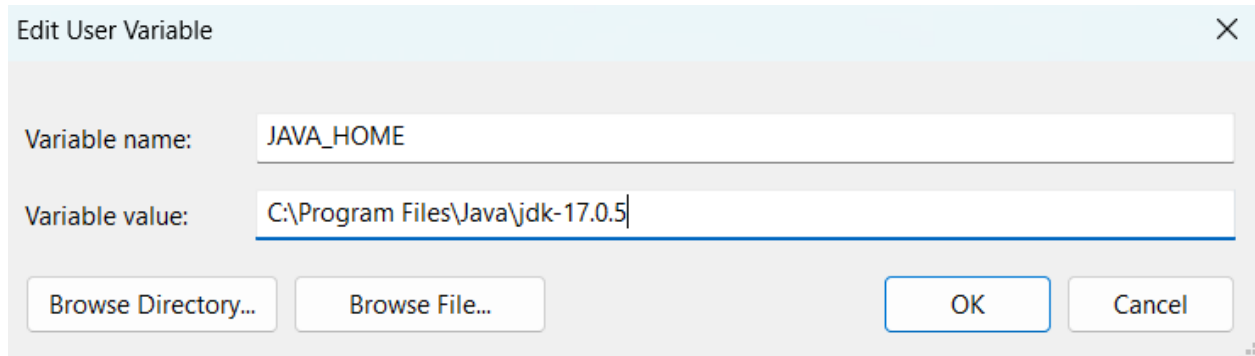
Topic 1 Activity 1

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GitHub: <https://github.com/jmdalton0/cst239-act1>

PART 1: TOOLS INSTALLATION AND VALIDATION

I am using VS Code, so I didn't get an Eclipse About box. However, here is the path variable to my instance of java on my machine.



Hello World output

```
c:\Users\jmdal\Projects\CST239\topic1-1> c: && cd c:\Users\jmdal\Projects\CST239\topic1-1 && cmd /C ""C:\Program Files\Java\jdk-17.0.5\bin\java.exe" -XX:+ShowCodeDetailsInExceptionMessages -cp C:\Users\jmdal\AppData\Roaming\Code\User\workspaceStorage\6cba043e1130498178f45ac3a0515cf1\redhat.java\jdt_ws\topic1-1_7ad8f58e\bin app.HelloWorld "
```

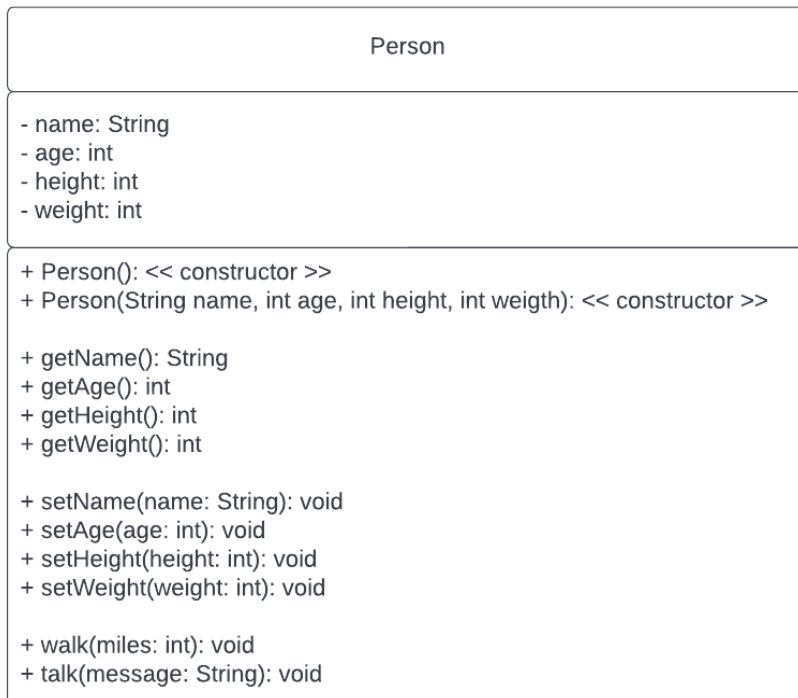
```
Hello, my name is Jesse
```

```
c:\Users\jmdal\Projects\CST239\topic1-1>
```

PART 2: DESIGNING, CODING, AND DOCUMENTING A PERSON CLASS

In the main method, a new Person object is initialized with the values passed into the constructor. Then, the public methods walk() and talk() are called. These methods print their output to the screen and the program ends.

Person UML



Person Output

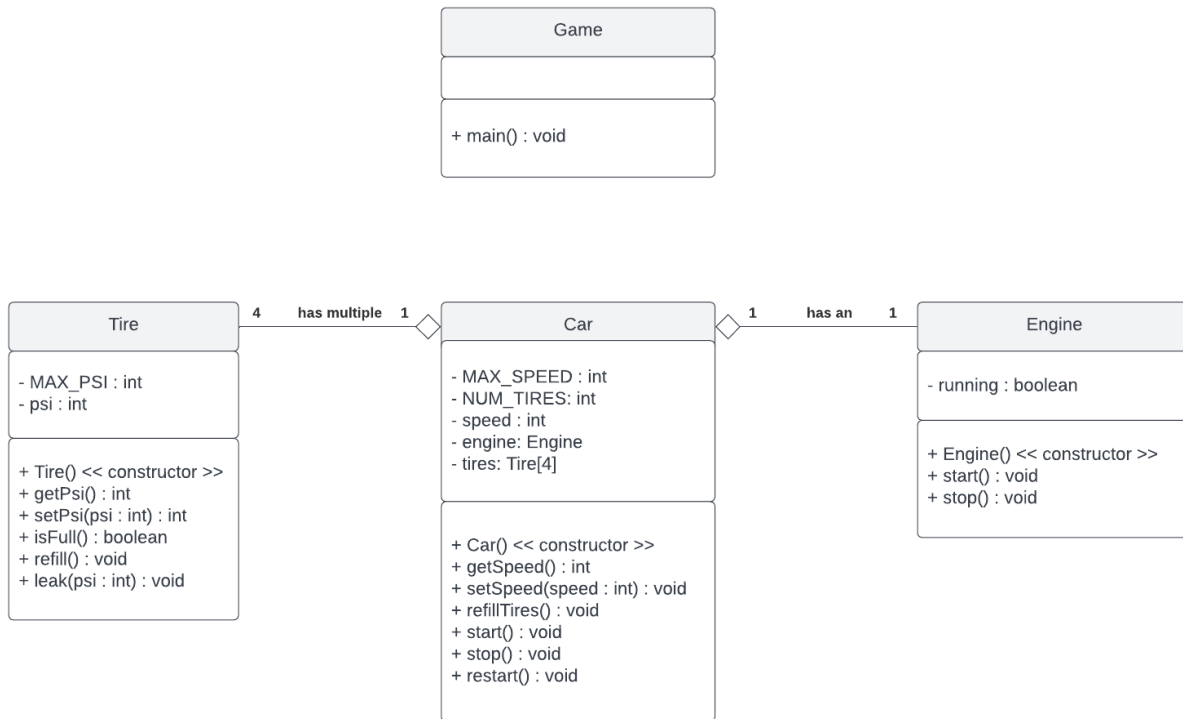
```
Microsoft Windows [Version 10.0.22621.1105]
(c) Microsoft Corporation. All rights reserved.

C:\Users\jmdal\Projects\CST239\topic1> cmd /C ""C:\Program Files\Java\
jdk-17.0.5\bin\java.exe" -XX:+ShowCodeDetailsInExceptionMessages -cp C
:\Users\jmdal\AppData\Roaming\Code\User\workspaceStorage\6d040135647fe
fa5b66b09cd230d8b00\redhat.java\jdt_ws\topic1_ad47e26a\bin app.Person
"

Jesse walked 5 miles.
Jesse said "Hello."
```

PART 3: RACE CAR

Racecar Game UML



Racecar Game Output

```
WELCOME TO THE RACE GAME

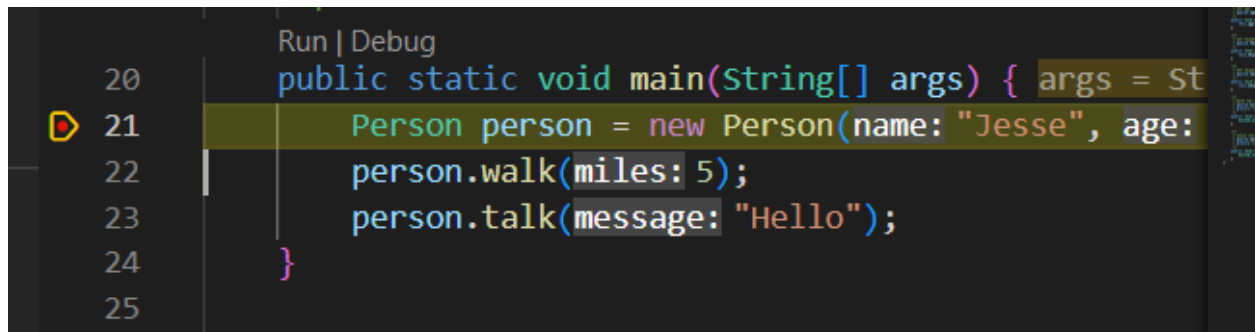
Ready for race 1?
Starting engine...
Engine started!
Current speed is 0
Increasing speed to 80mpg
Current speed is 60
FINISH... the race is over

Ready for race 2?
Restarting engine...
Engine started!
Current speed is 0
Increasing speed to 45mpg
Current speed is 45
FINISH... the race is over

Stopping car...
Car stopped
Thank you for playing
```

PART 4: DEBUGGING

Breakpoint in main()

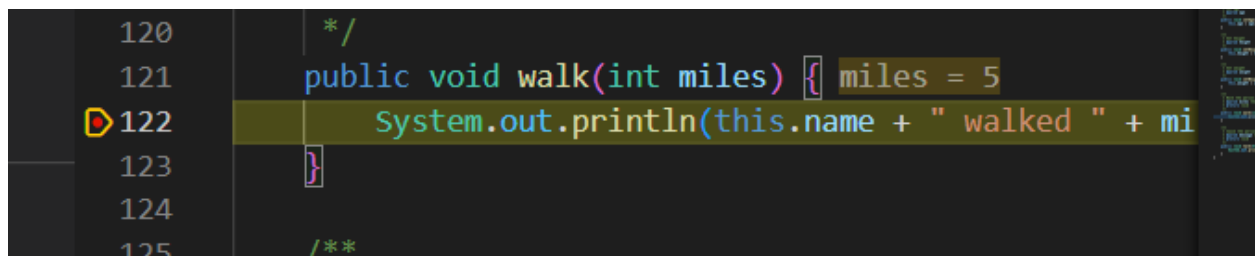


A screenshot of an IDE showing a Java code file. The code is as follows:

```
20 public static void main(String[] args) { args = St
21     Person person = new Person(name: "Jesse", age:
22     person.walk(miles: 5);
23     person.talk(message: "Hello");
24 }
25
```

A yellow breakpoint icon is placed on line 21. The 'Run | Debug' menu is visible at the top.

Breakpoint in walk



A screenshot of an IDE showing a Java code file. The code is as follows:

```
120 */
121 public void walk(int miles) { miles = 5
122     System.out.println(this.name + " walked " + mi
123 }
124
125 /**
```

A yellow breakpoint icon is placed on line 122.

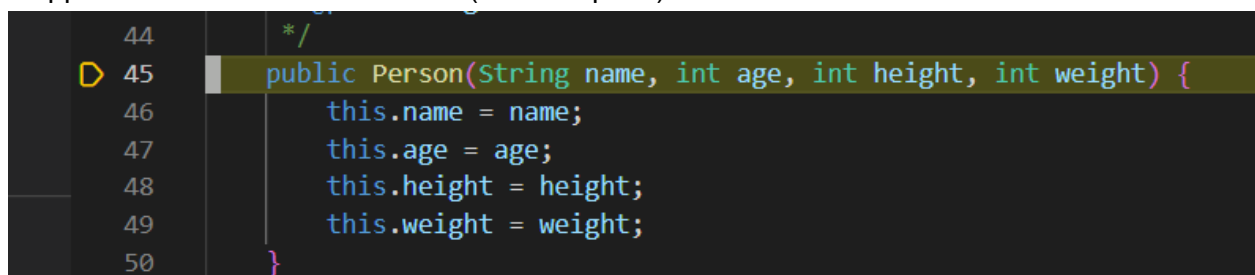
Variables at breakpoint



A screenshot of the 'VARIABLES' window in an IDE. It shows the following:

- Local
 - > message: "Hello"
 - > this: Person@11

Stepped into constructor from main (no breakpoint)



A screenshot of an IDE showing a Java code file. The code is as follows:

```
44 */
45 public Person(String name, int age, int height, int weight) {
46     this.name = name;
47     this.age = age;
48     this.height = height;
49     this.weight = weight;
50 }
```

A yellow breakpoint icon is placed on line 45.

Stack Trace at breakpoint

CALL STACK		
Thread [main] PAUSED ON STEP		
Person.<init>(String,int,int,int)	Person.java	45:1
Person.main(String[])	Person.java	21:1
Thread [Reference Handler]		RUNNING
Thread [Finalizer]		RUNNING
Thread [Signal Dispatcher]		RUNNING
Thread [Attach Listener]		RUNNING
Thread [Notification Thread]		RUNNING
Thread [Common-Cleaner]		RUNNING