Assignment 1 Book Exercises

Exercise 2.1:

Graphical user interface, text, application

Description automatically generated

Exercise 2.2:

Graphical user interface, application

Description automatically generated

Exercise 2.3:

The machine prints the ticket with the assumption that it was paid for -- hence the name ‘naïve ticket machine’.

Exercise 2.4-5:

Graphical user interface, application, Word

Description automatically generated

Exercise 2.6:

Graphical user interface, text, application

Description automatically generated

Exercise 2.7:

Yes, it matters.

Graphical user interface, text

Description automatically generated

Exercise 2.8:

It is possible to declare a class without specifying an access modifier, in which case it is implicitly public. This is not the best practice.

Exercise 2.9:

It will not be compiled without specifying the data type, as the ‘Ticket Machine’ is not a declared type yet.

Exercise 2.10:

Constructors:

Graphical user interface, text, application

Description automatically generated

Fields:

Graphical user interface, text, application

Description automatically generated

Methods:

public int getPrice()

public int getBalance()

public void insertMoney(int amount)

public void printTicket()

Exercise 2.11:

It is named the same as the class and does not return a value.

Exercise 2.12:

|  |  |
| --- | --- |
| **Declaration:** | **Type:** |
| private int count; | Integer |
| private Student representative; | Student |
| private Server host; | Server |

Exercise 2.13:

|  |  |
| --- | --- |
| **Field:** | **Name:** |
| private boolean alive; | alive |
| private Person tutor; | Tutor |
| private Game game; | game |

Exercise 2.14:

Student, Server, Person, and Game are all class names.

Exercise 2.15:

Yes, it matters.

A picture containing shape

Description automatically generated

Exercise 2.16:

Yes, semicolons are required.

Exercise 2.17:

public int status;

Exercise 2.18:

The Student class.

Exercise 2.19:

2 parameters. 1 String and 1 double.

Exercise 2.20:

I would guess the Book class would have the following (and more) fields:

Pages, Author, Publisher, ISBN, etc.

Exercise 2.21:

Graphical user interface, text

Description automatically generated

Exercise 2.22:

Graphical user interface, text

Description automatically generated

Exercise 2.23:

The getPrice() method returns the value of the price field, whereas getBalance() returns the value of the balance field.

Exercise 2.24:

“How much money has been inserted into the machine?”

Exercise 2.25:

The name doe not effect its function.

Exercise 2.26:

Graphical user interface, text, application

Description automatically generated

Exercise 2.27:

Text

Description automatically generated with low confidence

Exercise 2.28:

printTicket is a void, getPrice() returns an int.

Exercise 2.29:

They are voids because they are not used to access a specific value. They are mutator methods that alter the value of a private field.

Exercise 2.30:

Graphical user interface

Description automatically generated with low confidence

Graphical user interface, application

Description automatically generated

Exercise 2.31:

Because the return type is void.

Exercise 2.32:

A picture containing table

Description automatically generated

Exercise 2.33:

**public void increase(int points)**

**{**

score += points;

**}**

Exercise 2.34:

Yes, it is a mutator method of the score field.

Exercise 2.35:

**public void discount(int amount)**

**{**

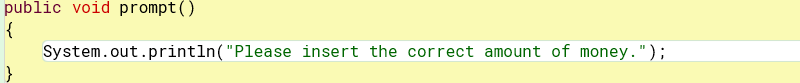
**Price -= amount;**

**}**

Exercise 2.36:

My cat has green eyes.

Exercise 2.37:



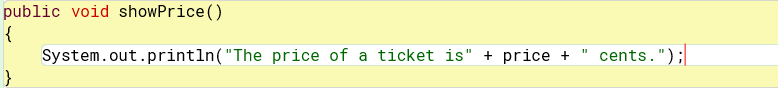
Exercise 2.38-39:

The output would be: ‘# price cents.’

Exercise 2.40:

Neither of them show the price of tickets, so no. It could be modified to output prices of different ticket machines with the appropriate parameters, however.

Exercise 2.41:



Exercise 2.42:

Graphical user interface, text, application

Description automatically generated

The outputs are different because the method is run on different objects with different values.

Exercise 2.43:

Text

Description automatically generated with medium confidence

It no longer requires input to instantiate.

Exercise 2.44:

Text

Description automatically generated with low confidence

Exercise 2.45:

A picture containing graphical user interface

Description automatically generated

Exercise 2.46:

No, it does not.

Exercise 2.47:

The only time this will make a difference is when the input value results in the test failing. In such a case the method would do nothing.

Exercise 2.48:

Graphical user interface, text, application, chat or text message

Description automatically generated

Exercise 2.49:

The fact that it can only be one of two values is fine if there is more than one test.

Exercise 2.50:

The better version only prints the ticket if enough money has been inserted.

Exercise 2.51:

No, the else statement is necessary here because there is no return nested in the if block, which would cause the error message to output to the console every time the method is executed.

Exercise 2.52:

Yes, if too much money was inserted

Graphical user interface, text, application

Description automatically generated

Exercise 2.53:

Graphical user interface, text, application

Description automatically generated

Exercise 2.54:

Graphical user interface, text

Description automatically generated

Exercise 2.55:

Text

Description automatically generated

Exercise 2.56:

Graphical user interface

Description automatically generated

Exercise 2.57:

Text

Description automatically generated

Exercise 2.58:

Because it sets the value of balance to 0 before returning it.

Exercise 2.59:

It will not compile because there is code after the return statement within the same scope.

Exercise 2.60:

It creates a local variable named price, instead of modifying the global variable.

Exercise 2.61:

Graphical user interface, text, application

Description automatically generated

Exercise 2.62:

Text

Description automatically generated

Exercise 2.63:

A discount field that is used to calculate a total price. This would minimize the alterations required.

Exercise 2.64:

String.

Exercise 2.65:

The method name is setCredits, the parameter type is int.

Exercise 2.66:

Graphical user interface, text, application

Description automatically generated

Exercise 2.67:

Text

Description automatically generated

Exercise 2.68:

Text

Description automatically generated

Exercise 2.69:

Text

Description automatically generated

Exercise 2.70:

Graphical user interface, text

Description automatically generated

Exercise 2.71:

Graphical user interface, text

Description automatically generated

Exercise 2.72:

Graphical user interface

Description automatically generated

Exercise 2.73:

A screenshot of a computer

Description automatically generated with medium confidence

Exercise 2.74:

**Student1:**

**Student**

Name: Benjamin Jonson

ID: 738321

Exercise 2.75:

Henry Moore

Exercise 2.76:

The output is ‘djb’.

Exercise 2.77:

Done.

Exercise 2.78:

Set a default value so that there is always something returned.

Exercise 2.79:

Done.

Exercise 2.80:

Missing semicolons prevent the code from compiling.

Exercise 2.81:

The balance of the t2 object is returned.

Exercise 2.82:

The balance of t2 is not affected by the insertMoney method that was run on t1.

Exercise 2.83:

Graphical user interface, text, application

Description automatically generated

Exercise 2.84:

Table

Description automatically generated

Exercise 2.85:

Table

Description automatically generated with low confidence

Exercise 2.86:

Yes, because there are no mutator methods.

Exercise 2.87:



Exercise 2.88:

Text

Description automatically generated with medium confidence

Table

Description automatically generated with medium confidence

Exercise 2.89:

Graphical user interface, text, application

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Graphical user interface, text, application

Description automatically generated

Exercise 2.90:

Graphical user interface, text, application

Description automatically generated

Exercise 2.91:

Graphical user interface, text, application

Description automatically generated with medium confidence

Exercise 2.92:

Graphical user interface, text

Description automatically generated with medium confidence

Exercise 2.93:

Text

Description automatically generated

Exercise 2.94:

Text

Description automatically generated