**Final Project**

**Calculate Return on Investment**

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**Calculate ROI**   
This Java program demonstrates several key features of object-oriented programming:

**Encapsulation**

The data (brand name, gain, and cost of equipment) is encapsulated within the HashMap objects, while their HashMap is further encapsulated with an ArrayList. This encapsulation provides a way to bundle the data and methos that operate on them together.

**Polymorphism**

The Collections.sort() method is an example of polymorphism. It can sort any List of objects, as long as a comparator is provided. In this case, a custom Comparator is provided to sort a List of Map objects.

A computer screen shot of a code

Description automatically generated

**Static Methods**

The sortEquipment and searchEquipment methods in the EquipmentManager class are static methods. This means they belong to the class itself, not to any instance of the class. This is a feature of object-oriented programming that allows methods to be called without creating an instance of the class.

A computer screen shot of a code

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**Interfaces**

The program uses several interfaces from the Java Collections Framework, including List, Map, and Comparator. This allows the program to work with different kinds of lists, maps, and comparison rules, demonstrating the flexibility and reusability of object-oriented programming.

**Summary**

In summary, this program is a good example of how object-oriented programming principles can be used to structure a program in a way that is easy to understand, flexible, and reusable.

**Output**

A screenshot of a computer program

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