

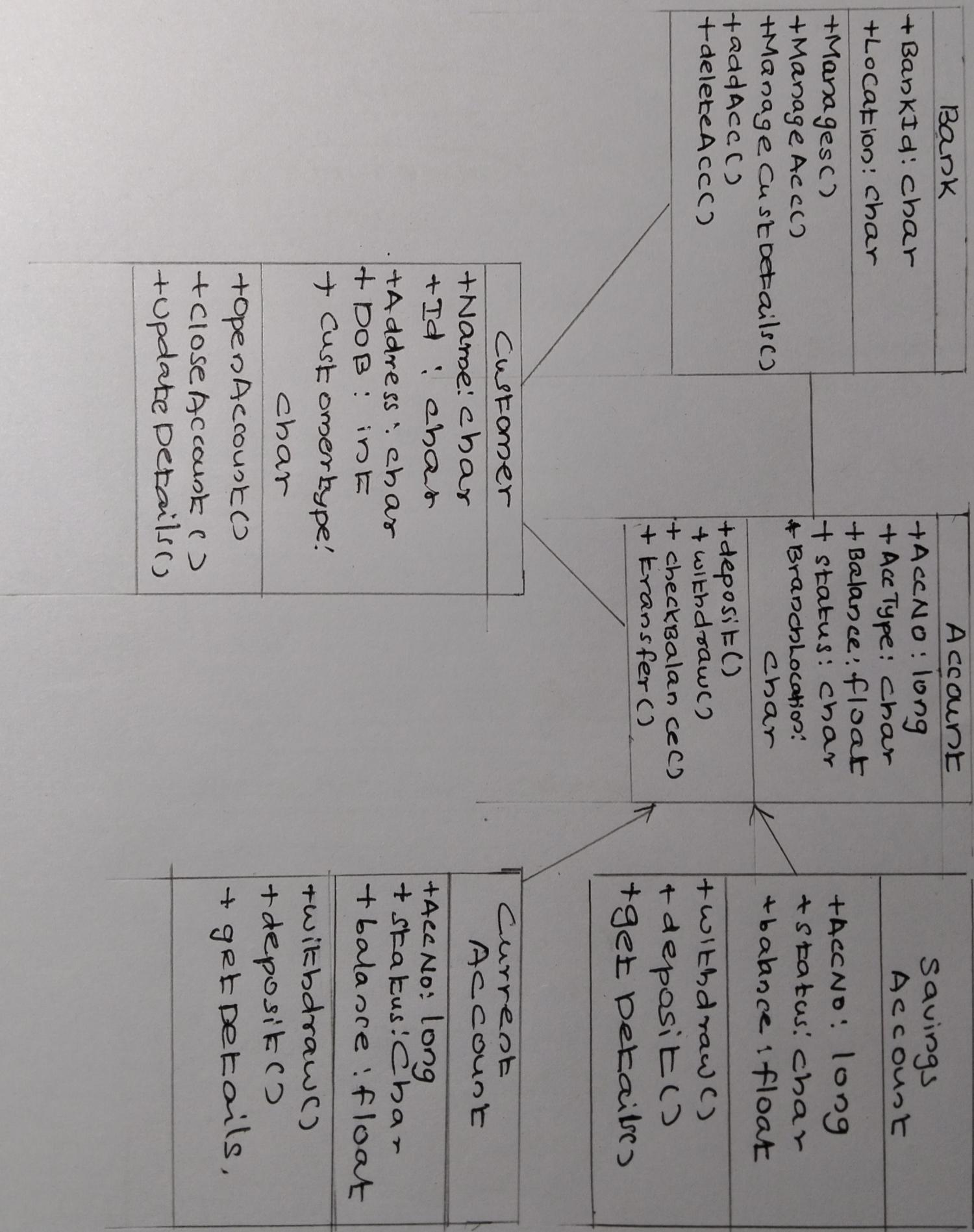
# Assignment

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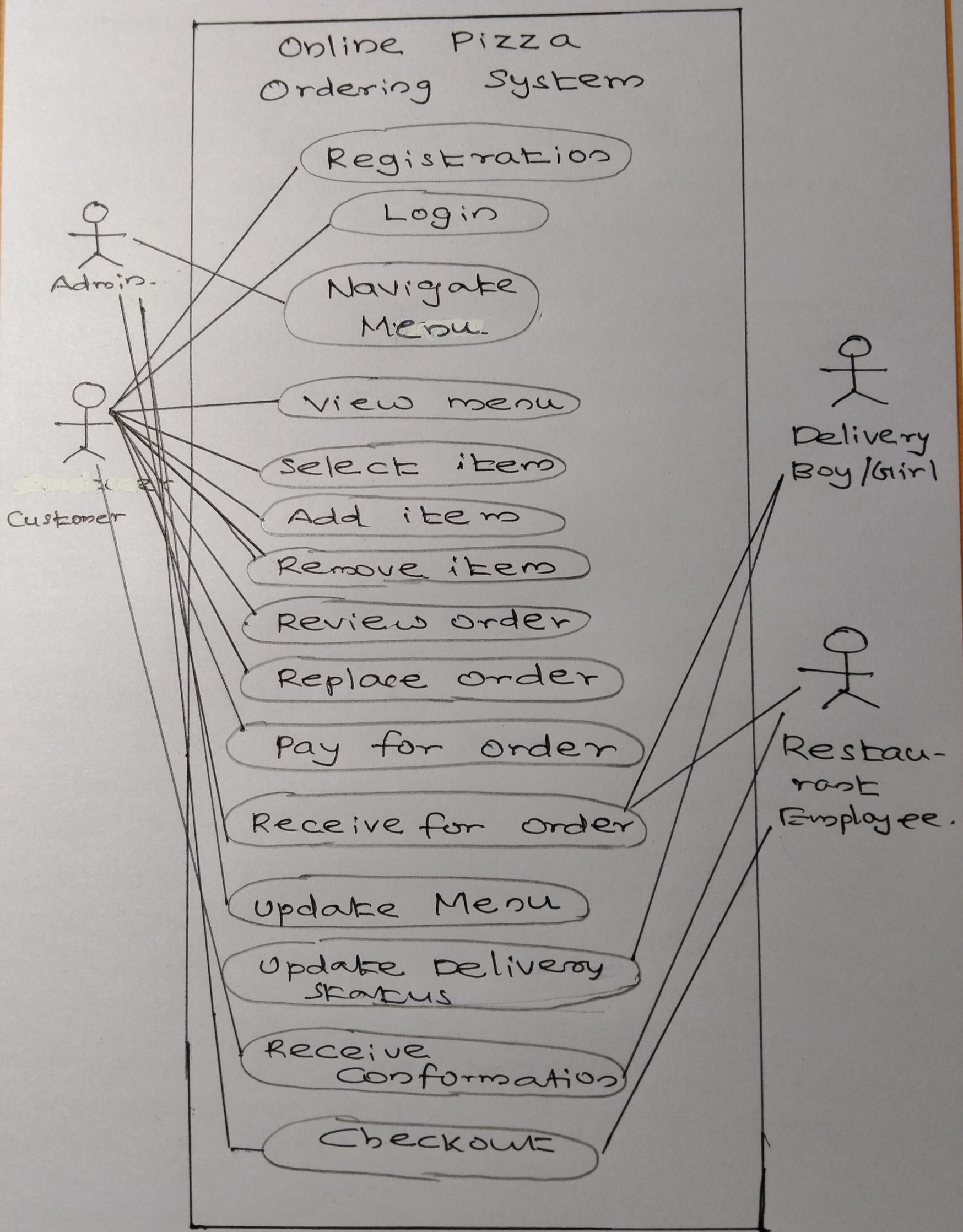
Object Oriented Programming  
Using JAVA

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1. Class diagram: Consider a Banking system. Identify three entities in the system that can be represented using classes and show the relationship between them using UML class diagrams.



2. Use Case Diagram: Draw a Use Case diagram for the online Pizza ordering system.



3. outline the reasons as of why Java programs are known as "Write once and Run Anywhere" programs?

Soln:

Java programs are called WORA (Write Once, Run Anywhere) due to the following Reasons.

1. **Platform Independence:** Java programs are compiled into bytecode by the Java Compiler. This bytecode is not specific to any machine or operating systems. Instead, it can run on any platform that has a Java Virtual Machine (JVM), making it platform-independent.

2. **Java Virtual Machine (JVM):**

The JVM acts as an intermediary between the Java program and the underlying operating systems. It interprets the bytecode into machine code that the host system can understand. As a result, the same Java bytecode can be executed on any platform that supports JVM, ensuring portability.

### 3. Consistency Across Platforms:

Unlike languages that are compiled directly into machine-specific code (like C or C++), Java's bytecode remains the same, ensuring consistent behaviour across different operating systems such as Windows, Linux, and macOS.

### 4. Standard Libraries: Java comes with a set of standardized libraries that abstract the operating system-specific details, ensuring that the core functionality remains uniform across platforms.

### 5. Cross Platform Development:

Developers can write a Java program on one program on one system and expect it to run without modifications on any other system that supports the JVM, reducing development time and effort.