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Table of Contents

[Task 1 3](#_Toc415839537)

[Define the term ‘use case’ and explain the various types of actors in a Use Case. 3](#_Toc415839538)

[Explain the difference between the <<include>> and <<extends>> relationships in use case diagrams? Give examples 3](#_Toc415839539)

[Describe with examples ‘encapsulation’, ‘information hiding’, ‘polymorphism’ and ‘data abstraction’. 3](#_Toc415839540)

[What is the difference between USDP and the Waterfall lifecycles in the relationship of between activities and phases? 3](#_Toc415839541)

[Explain Class diagram. Outline the main steps in developing a class diagram for a Use Case (UC). 3](#_Toc415839542)

[Task 2 3](#_Toc415839543)

[Question 1 3](#_Toc415839544)

[Start line run 3](#_Toc415839545)

[Record employee joining the line 3](#_Toc415839546)

[Record employee leaving the line 3](#_Toc415839547)

[Stop line 3](#_Toc415839548)

[Question 2: Communication diagram 3](#_Toc415839549)

[Question 3: Class diagram 3](#_Toc415839550)

[Bibliography 4](#_Toc415839551)

# Task 1

## Define the term ‘use case’ and explain the various types of actors in a Use Case.

Use case is defined as a description of the system functionality form users’ view (Bennett, McRobb, & Farmer, 2010).

There are two major types of actors:

* The role of humans who interact with a specific use case in the system.
* The role of other systems which interact with a specific use case in the system.
* The role of devices which interact with a specific use case in the system.

## Explain the difference between the <<include>> and <<extends>> relationships in use case diagrams? Give examples

## Describe with examples ‘encapsulation’, ‘information hiding’, ‘polymorphism’ and ‘data abstraction’.

## What is the difference between USDP and the Waterfall lifecycles in the relationship of between activities and phases?

## Explain Class diagram. Outline the main steps in developing a class diagram for a Use Case (UC).

# Task 2

## Question 1

### Start line run

### Record employee joining the line

### Record employee leaving the line

### Stop line

## Question 2: Communication diagram

## Question 3: Class diagram

# Bibliography

Bennett, S., McRobb, S., & Farmer, R. (2010). *Object-Oriented Systems Analysis and Design Using UML (4th edition).* Berkshire: McGraw-Hill Education.