

Tute 3

Q1) Actors: Project Manager
Printer

Action states : Enter data
Generate information
Print information

Project manager : **Enter data** goes to **Generate information** in project management system
(a control flow / flow transition happen)

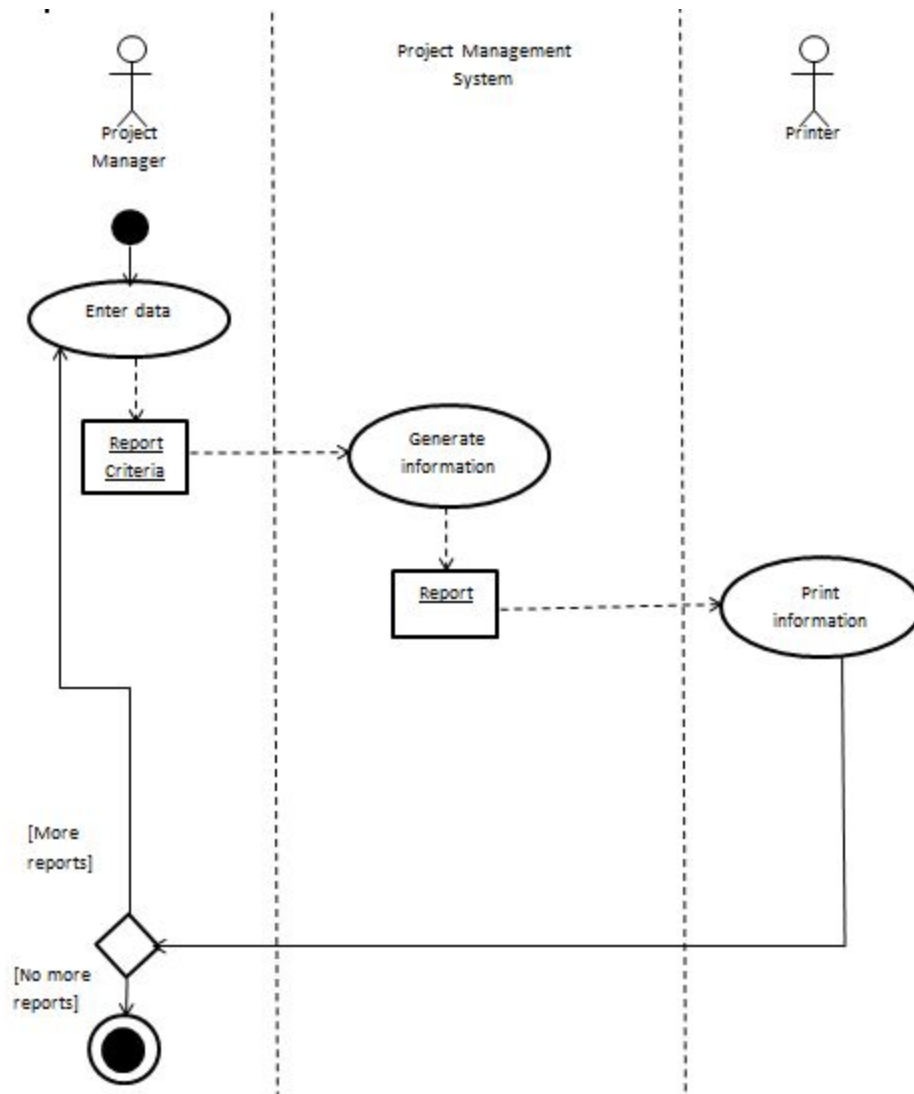
Generate information : create an object called report.

Generate information to **Report** an object flow happens.

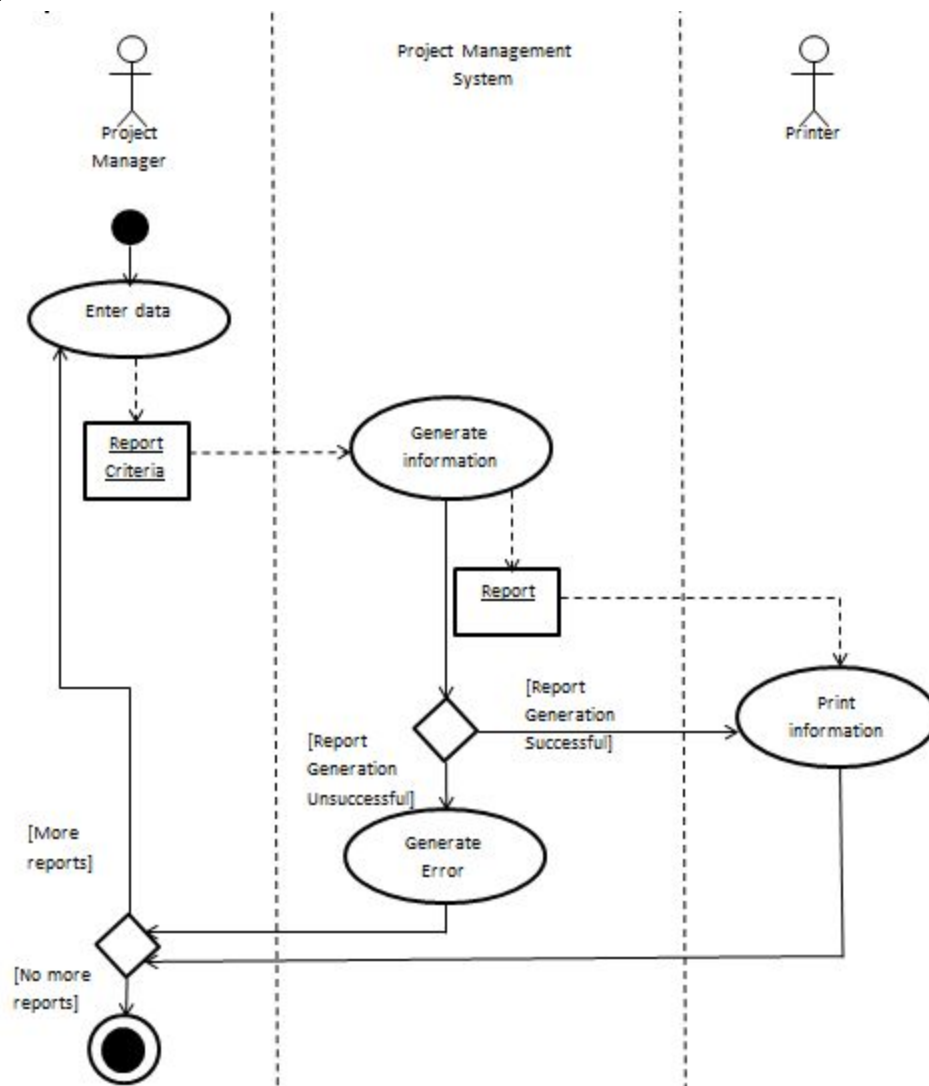
Report to **Print information** an object flow happens.

From **Print information** a control flow happens, where at the end Project manager takes a decision to print more or to stop.

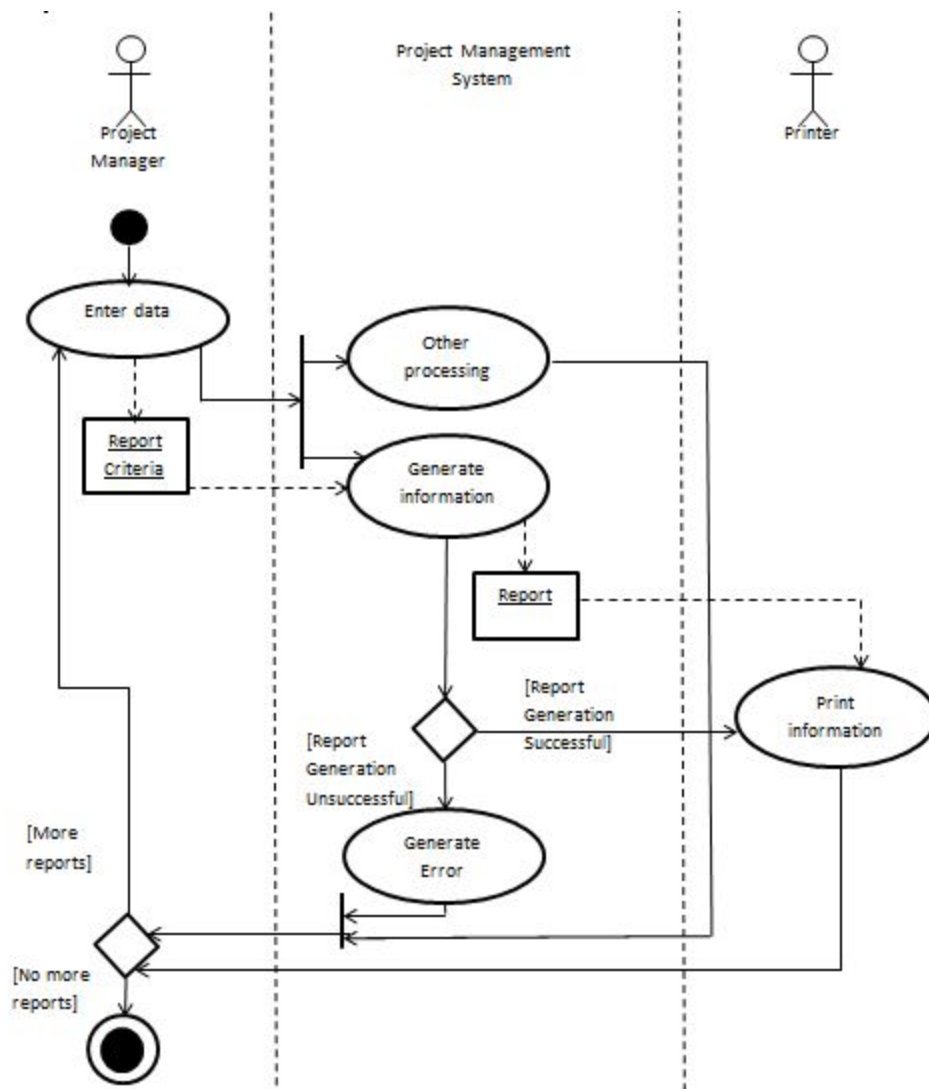
a)



b)



c)



Q2) Actor : Human resource

Use cases:

- Login
- logout

Actor : Project Manager - inherited from the actor human resource, therefore project manager inherited all the use cases from human resource actor.

Use cases :

- Login (inherited from human resource)
- Logout (inherited from human resource)
- Manage project - maintain activity, maintain task, maintain project use cases are optional use cases to the base use case manage project
- Manage project base use case includes inclusion use case case log activity
- Actor : Resource manager - inherited from the actor human resource, therefore Resource manager inherited all the use cases from human resource actor.

Use cases :

- Login (inherited from human resource)
- Logout (inherited from human resource)
- Manage resource - Manage resource base use case includes inclusion use case log activity

Actor : Printer

Use cases :

- Generate report - inherited from the use case publish status

Actor : Project web server

Use cases :

- Generate web sitet - inherited from the use case publish status

Actor : System administrator

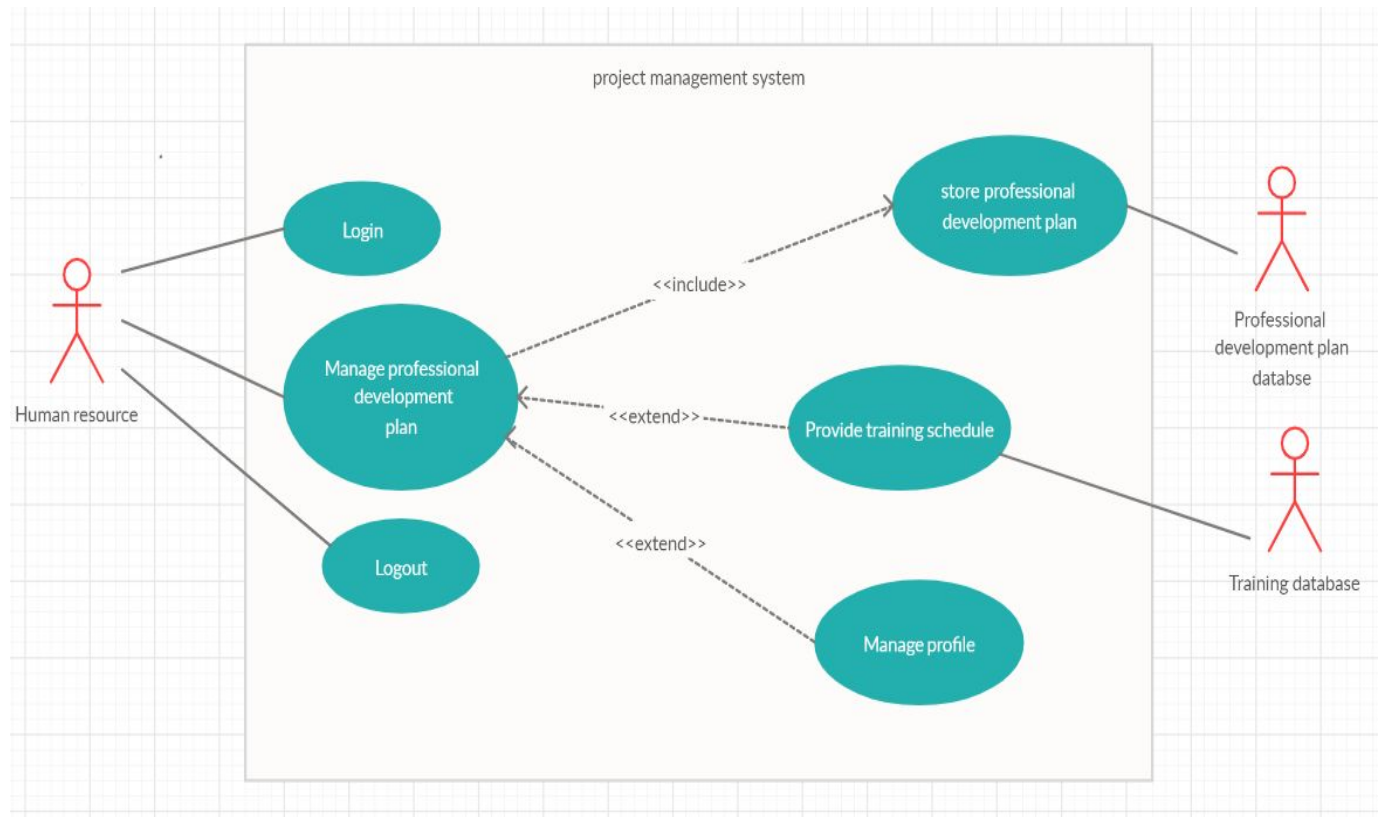
Use cases :

- Administer System use case is using extend dependencies. It shows that a system administrator is offered two options — starting up the system or shutting down the system — at the extension point named Administration Functions, which is described as being available on the administration menu of the user interface.
- The Startup System use case is available as an option at the Administration Functions extension point of the Administer System use case. The Startup System use case has two extension points named Before and After. The Before extension point is described as occurring before the startup functionality is performed by the system, and the After extension point is described as

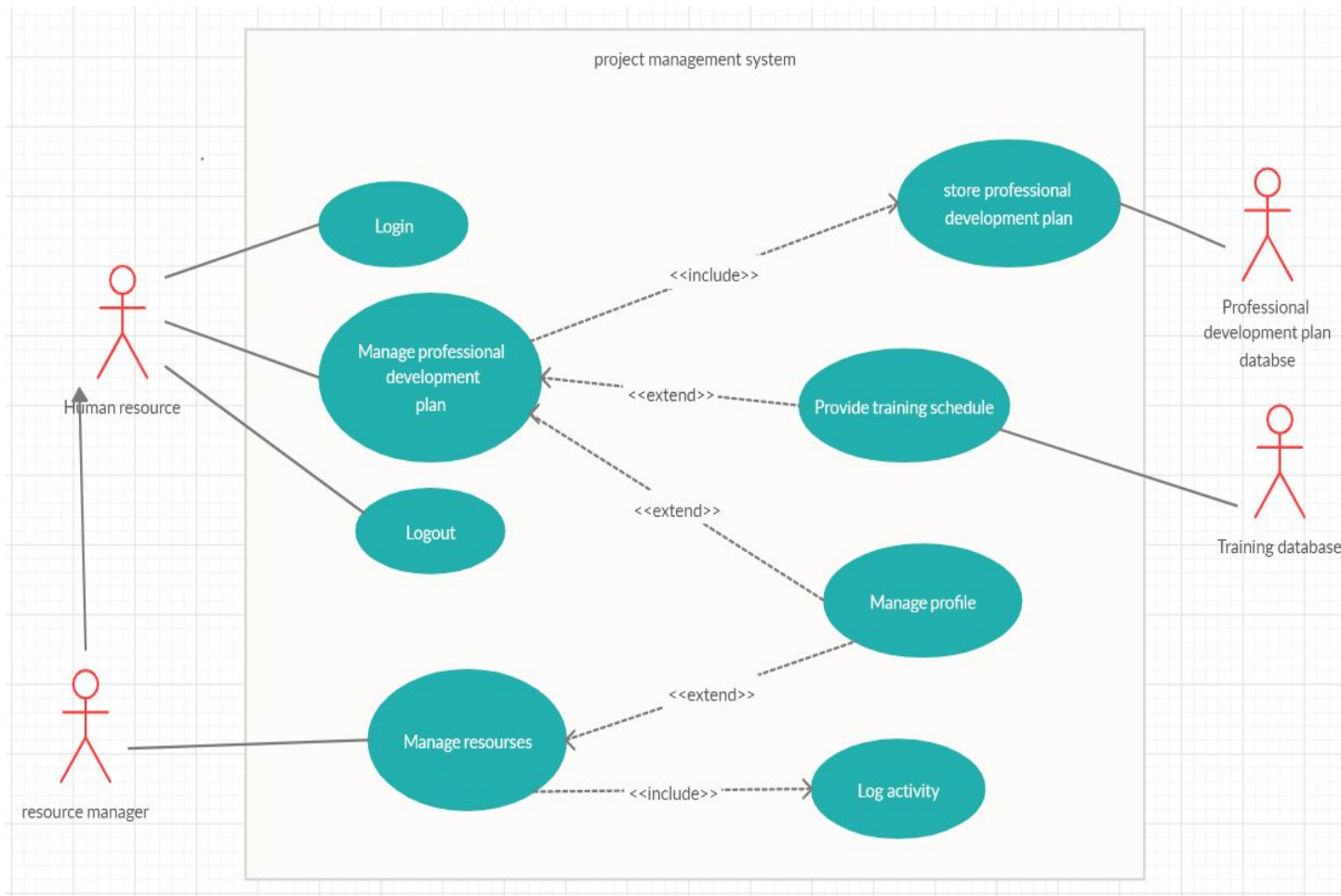
occurring after the startup functionality is performed by the system. The Restore Data use case is available as an option at the Before extension point of the Startup System use case.

- The Shutdown System use case is available as an option at the Administration Functions extension point of the Administer System use case. The Shutdown System use case has two extension points, named Before and After. The Before extension point is described as occurring before the shutdown functionality is performed by the system, and the After extension point is described as occurring after the shutdown functionality is performed by the system. The Backup Data use case is available as an option at the After extension point of the Shutdown System use case.

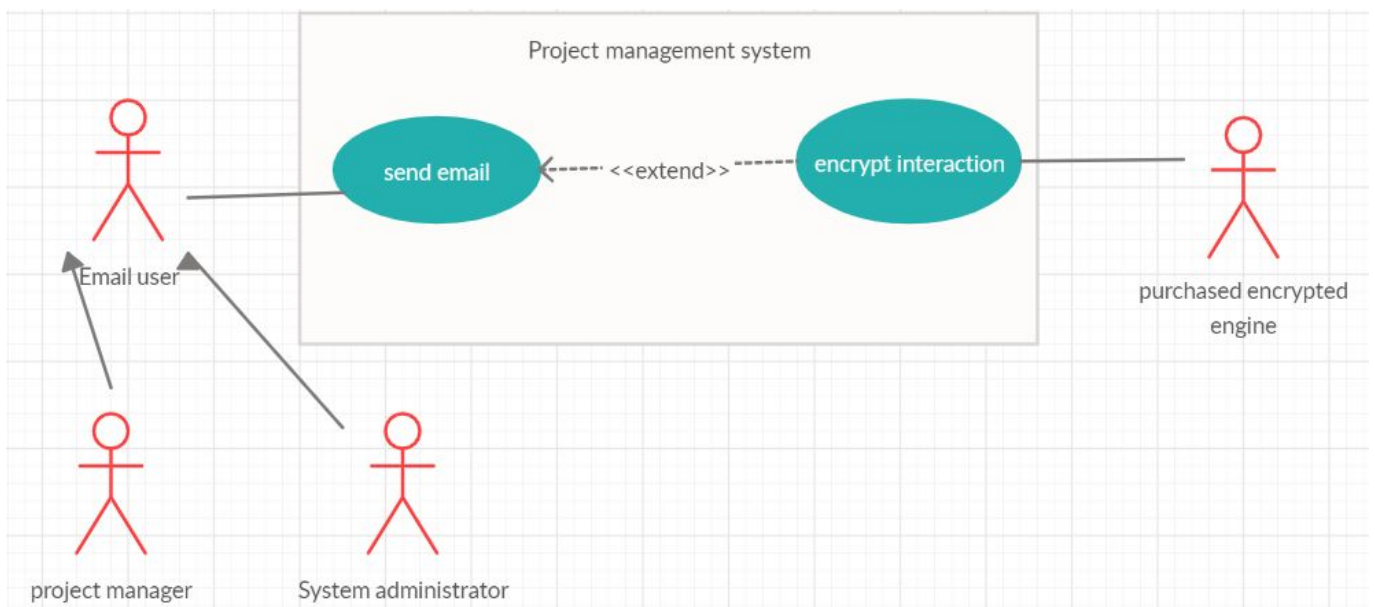
a)



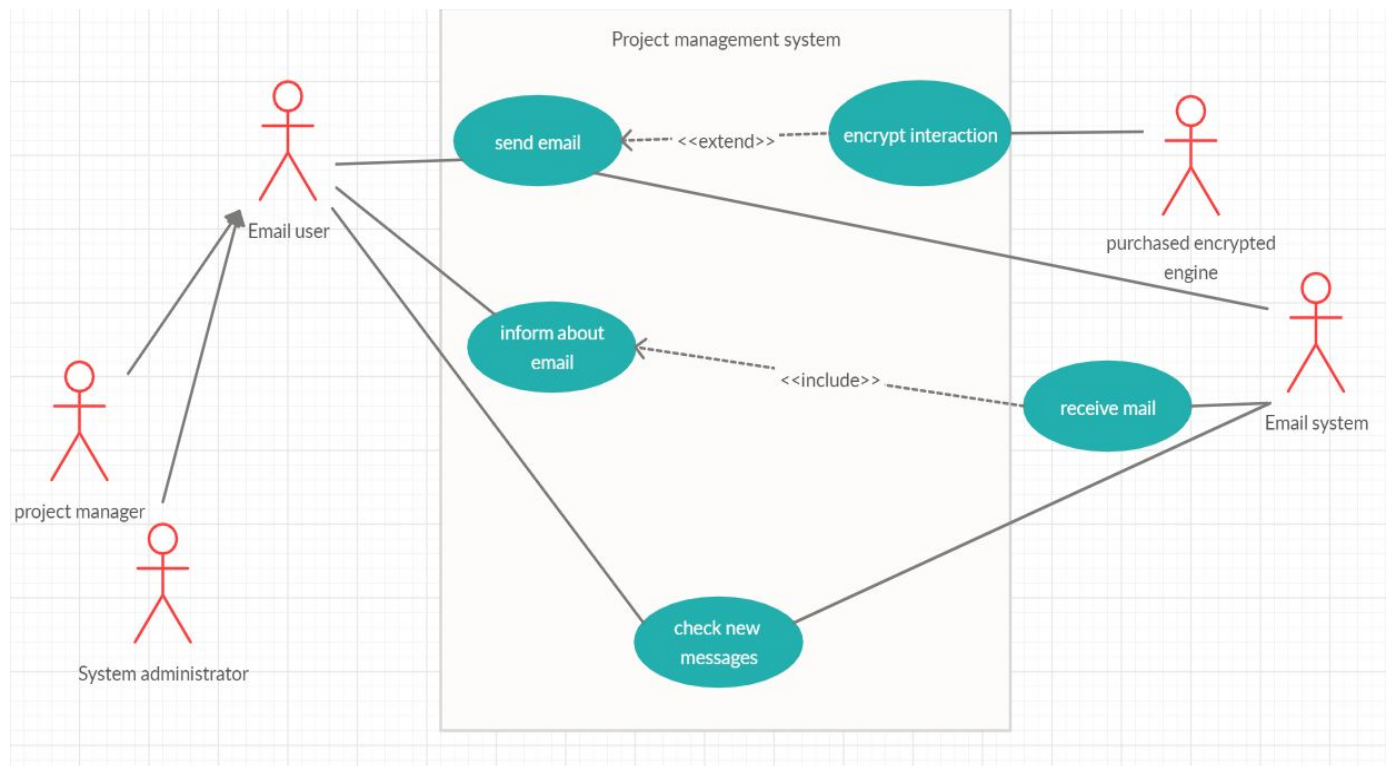
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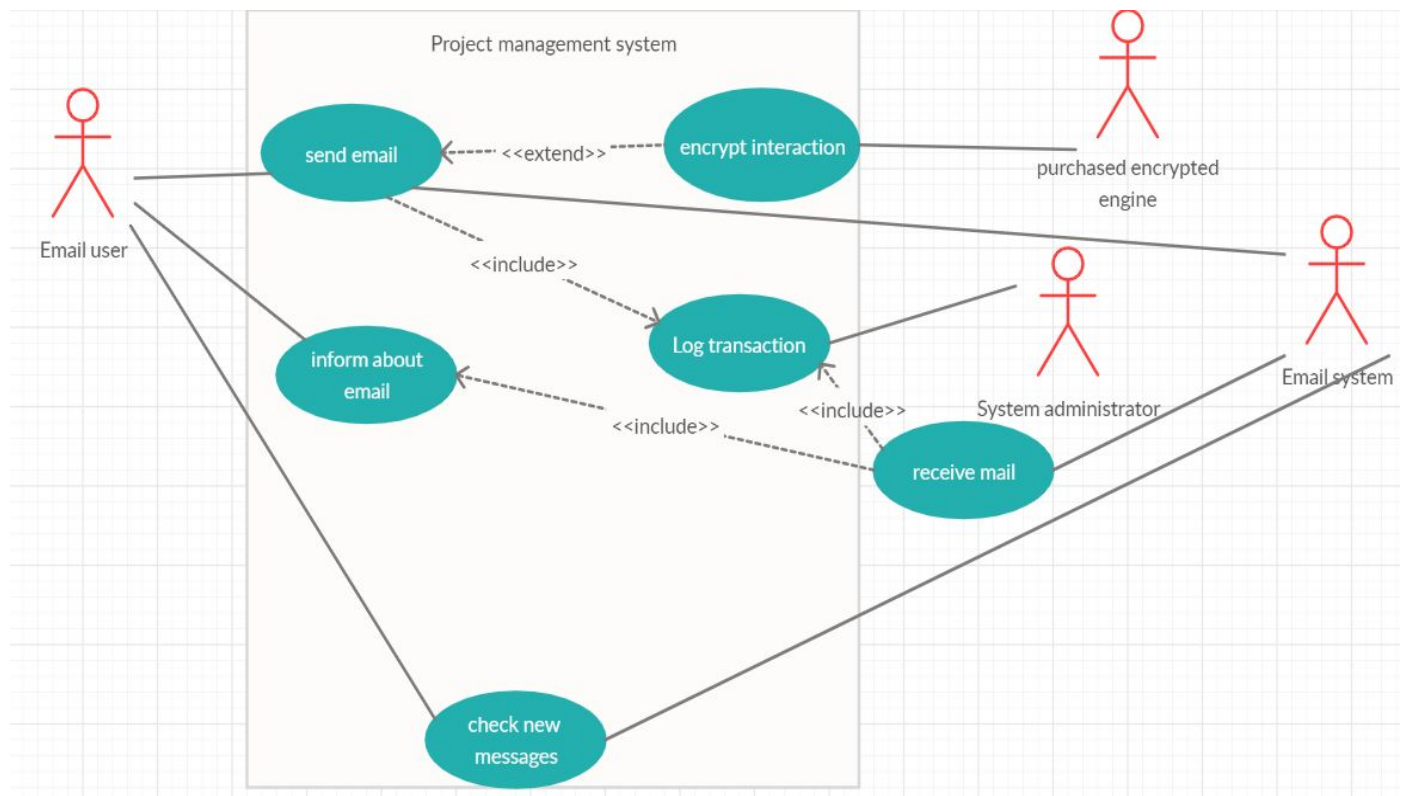
c)



d)



e)



Q3)

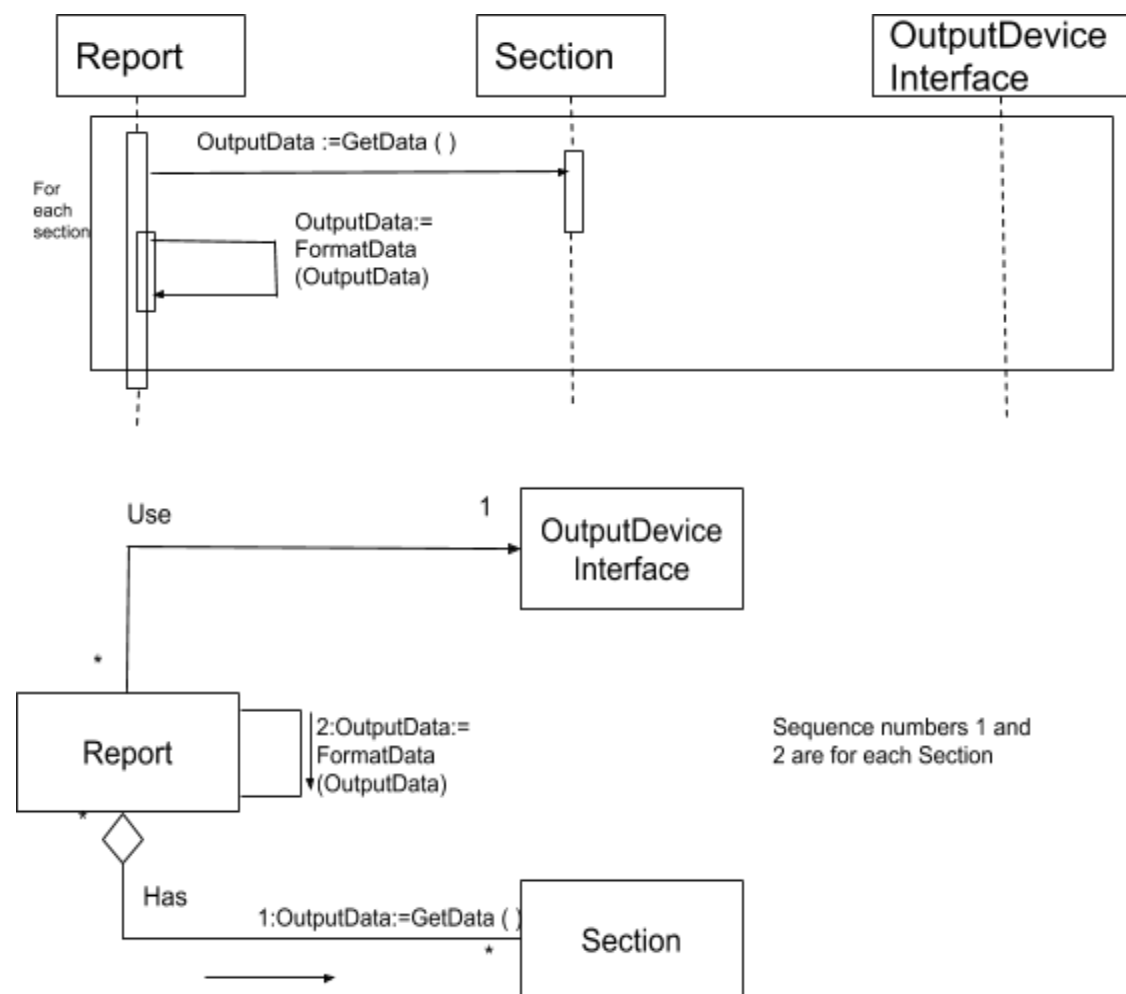
Figure 1 : There are three elements(Objects) in the sequence diagram. They are **Report**, **Section** and **OutputDeviceInterface**.

Figure 2 :

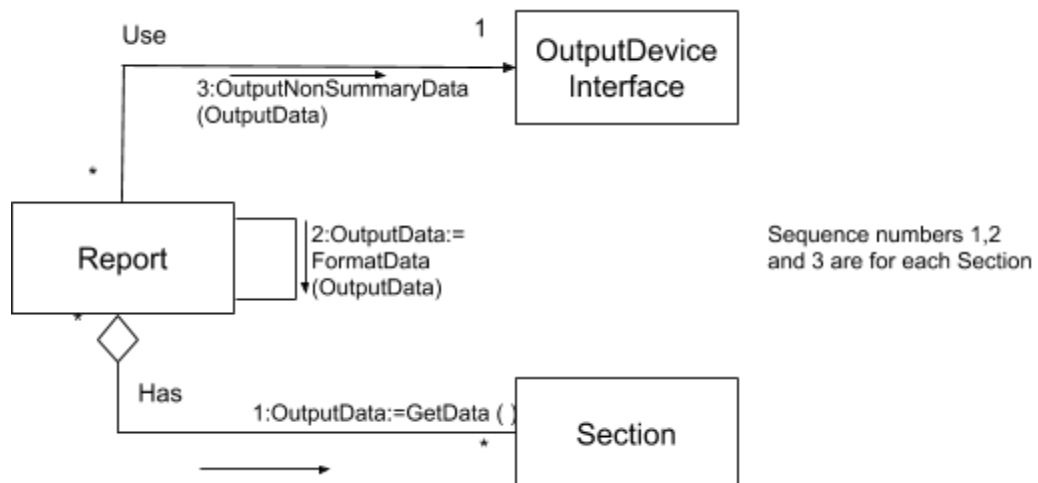
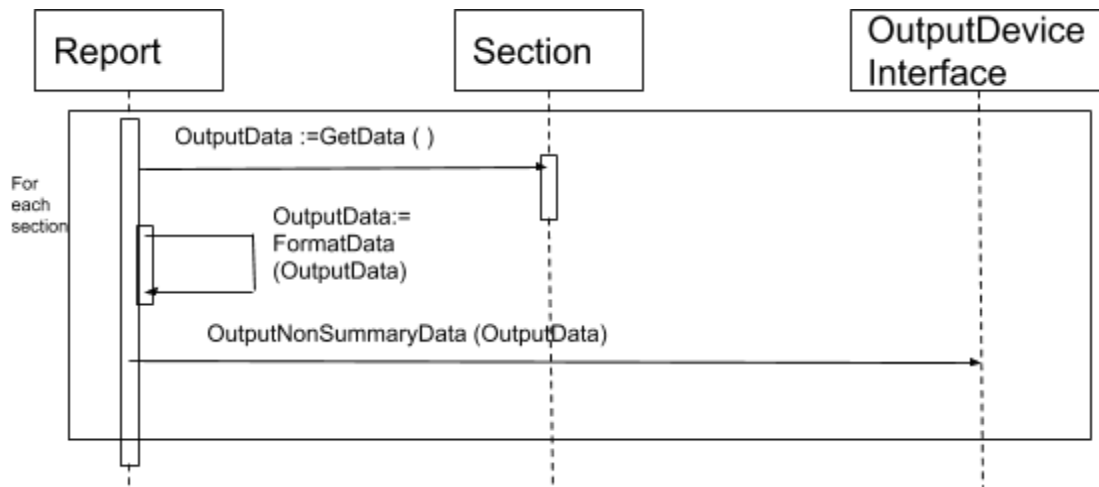
The Element Report is composed of Sections. Report and Sections has an aggregation relationship - 'Has'. So Reports have many Sections.

Elements Report and OutputDeviceInterface has an association relationship using 'Use'. Many Reports can use a single OutputDeviceInterface.

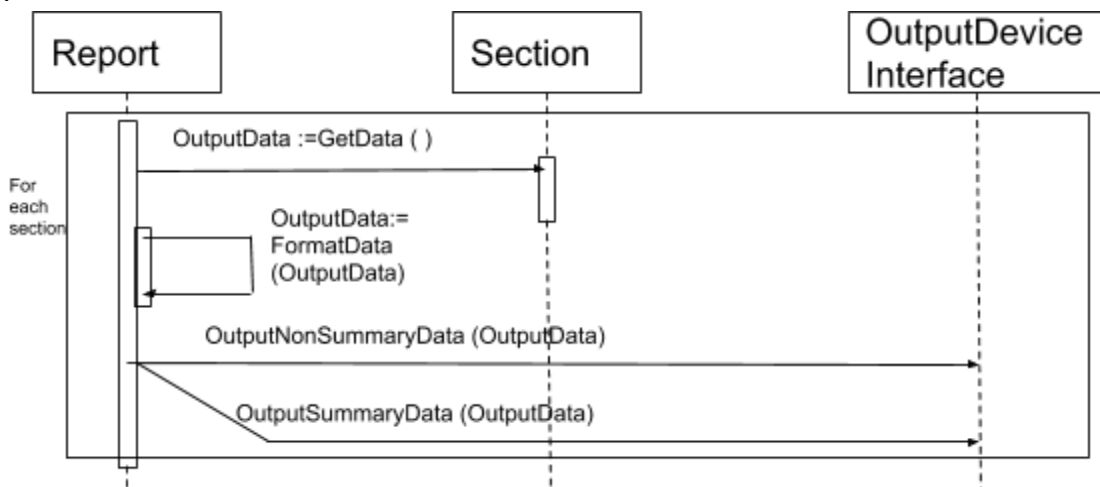
a)

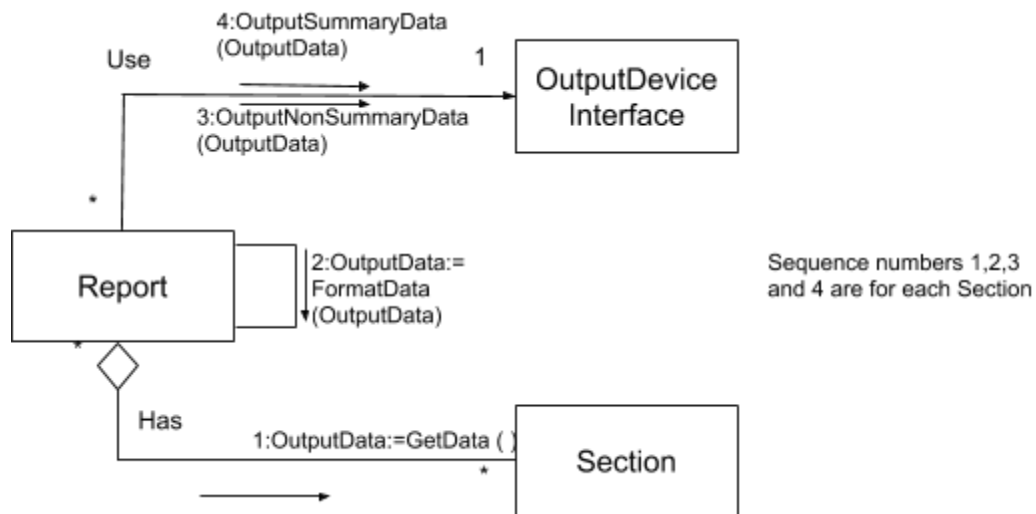


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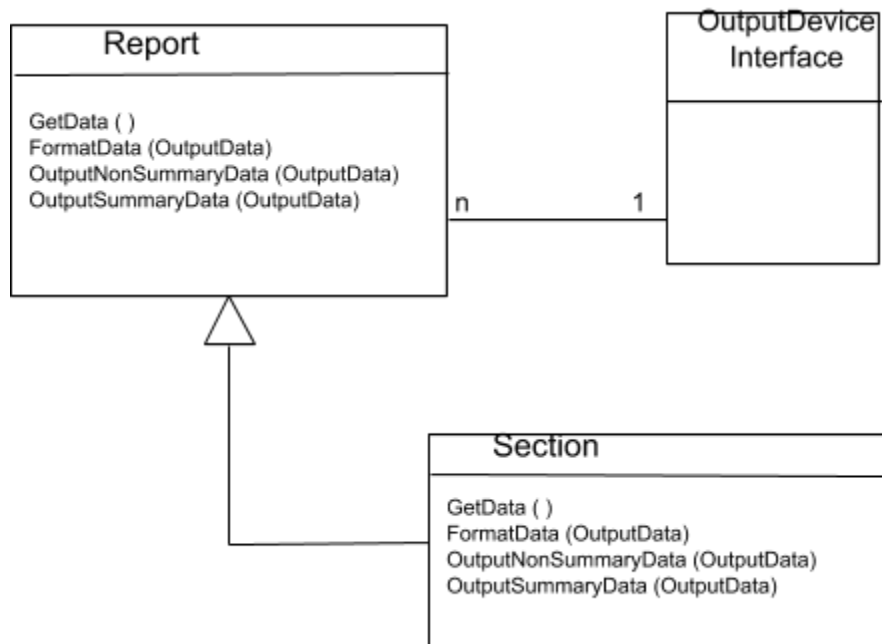


c)





d) Static class diagram referring to the collaboration diagram in part c

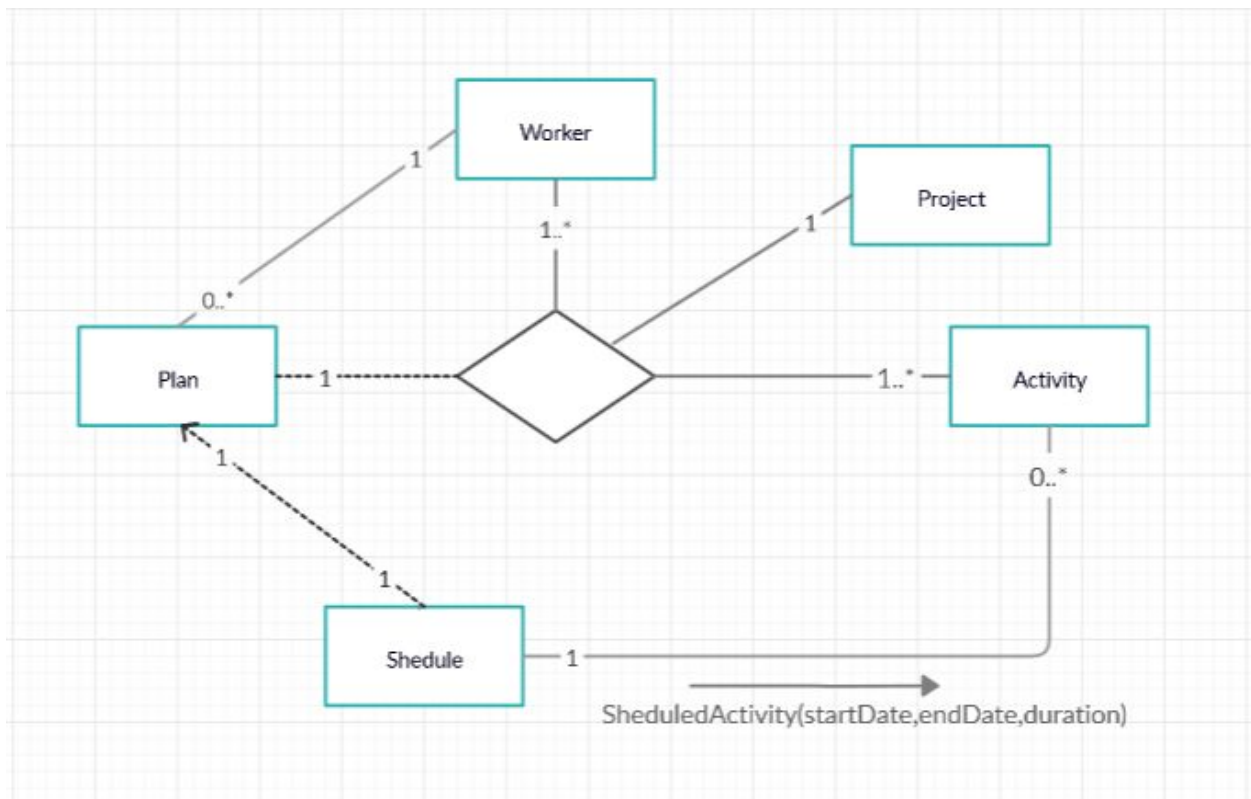


Q4) It is a part of a class diagram.

Classes : Plan
 Worker
 Project
 Activity

From the way they are connected it shows that for one class all are connected. All should participate in one class.

1)



2)

