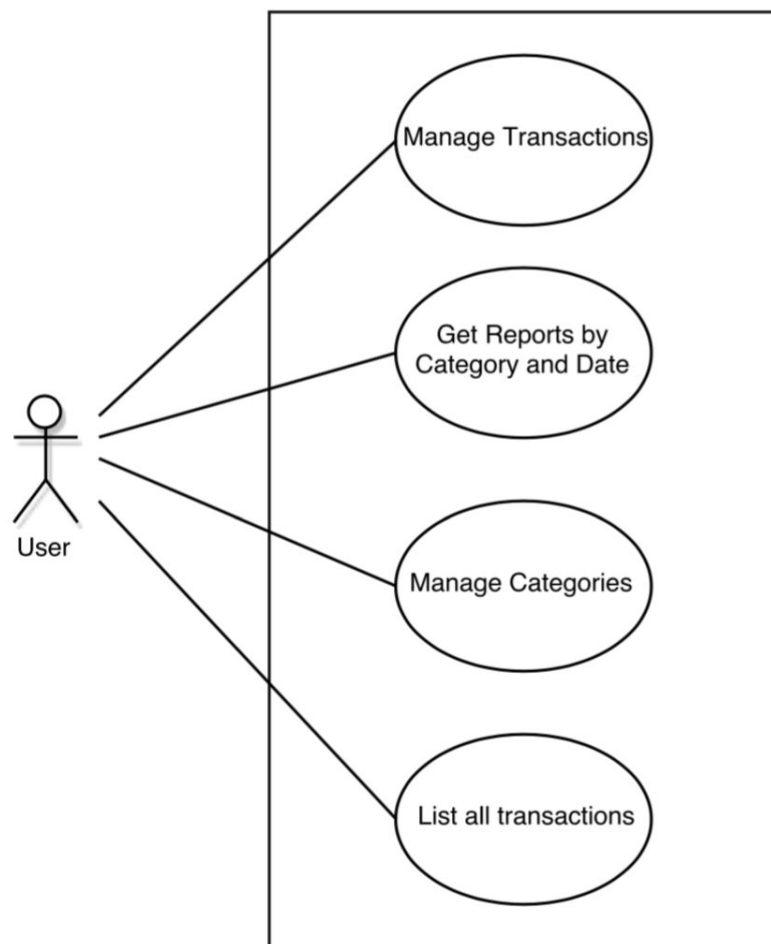


Daniel Garrido

PDA Software Development: Analysis & Design unit Level 8

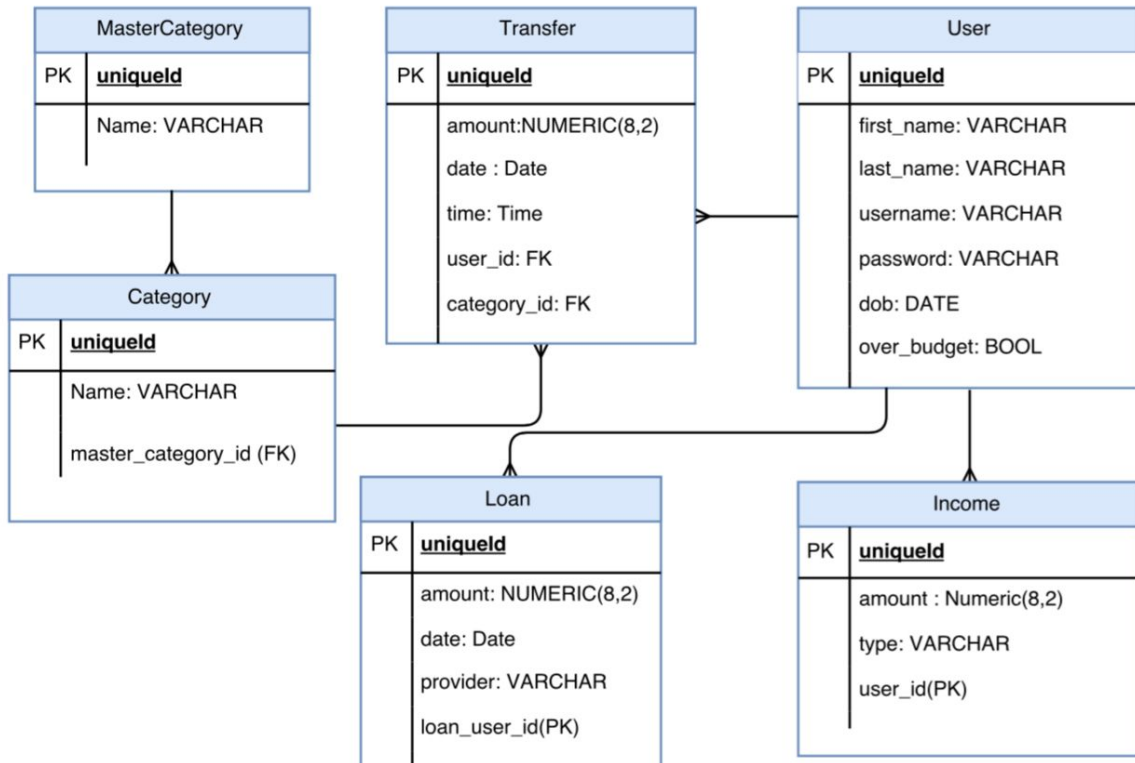
A.D 1 Define requirements using a Use Case Diagram(s)

Use_Case_Diagram



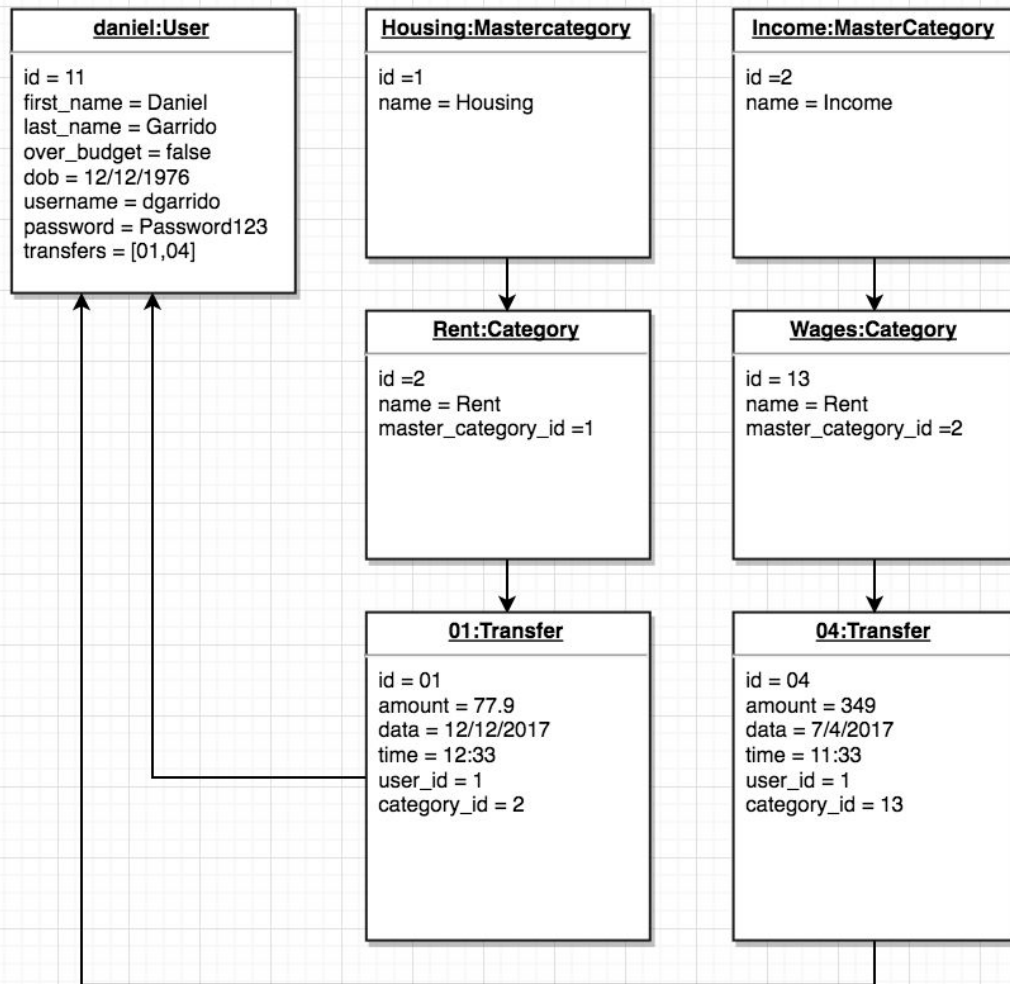
A.D 2 Looking at your Use Case Diagram(s), create a Class diagram.

Class_Diagram



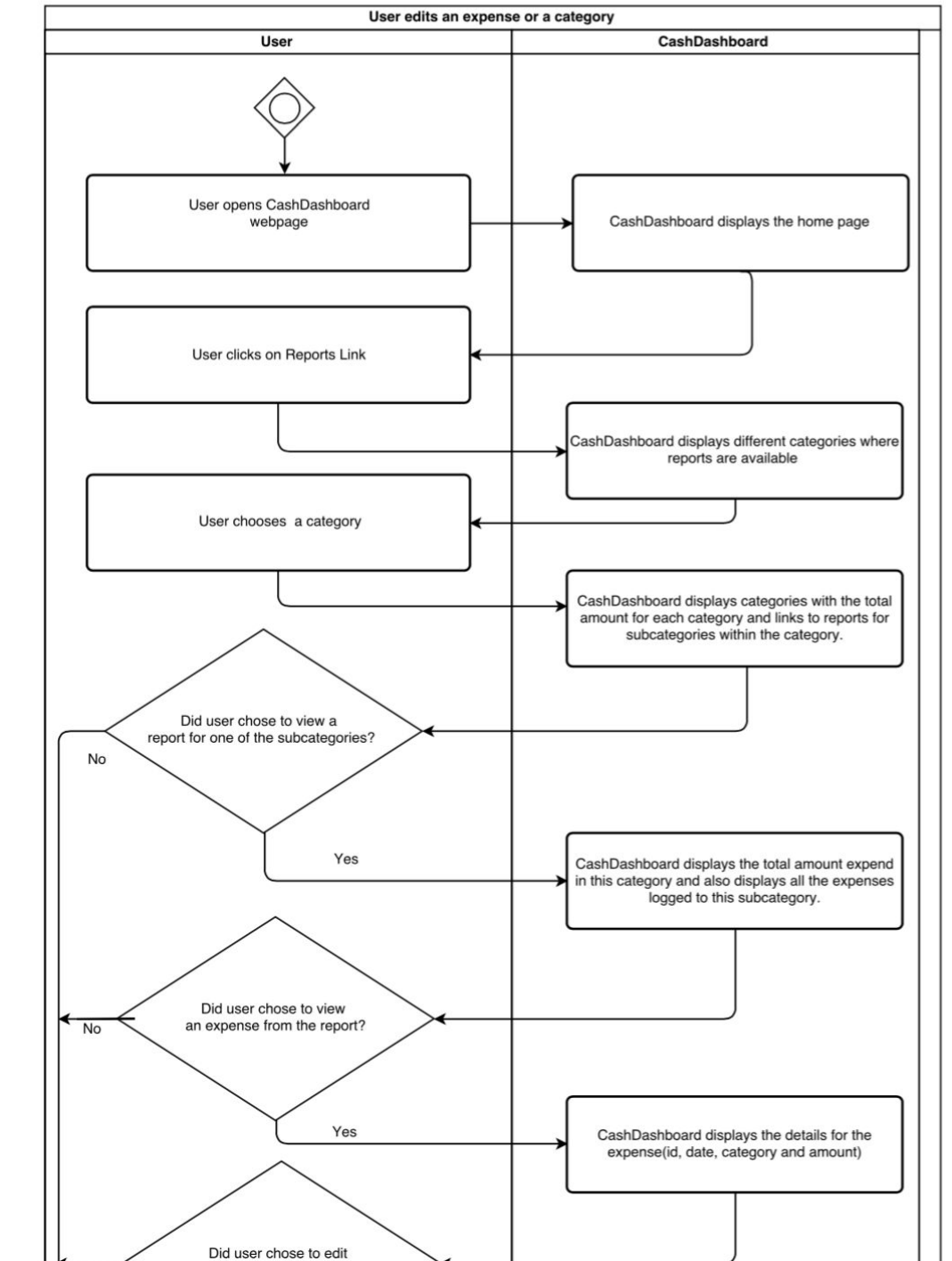
A.D 3 Looking at your Class diagram, create an Object diagram .

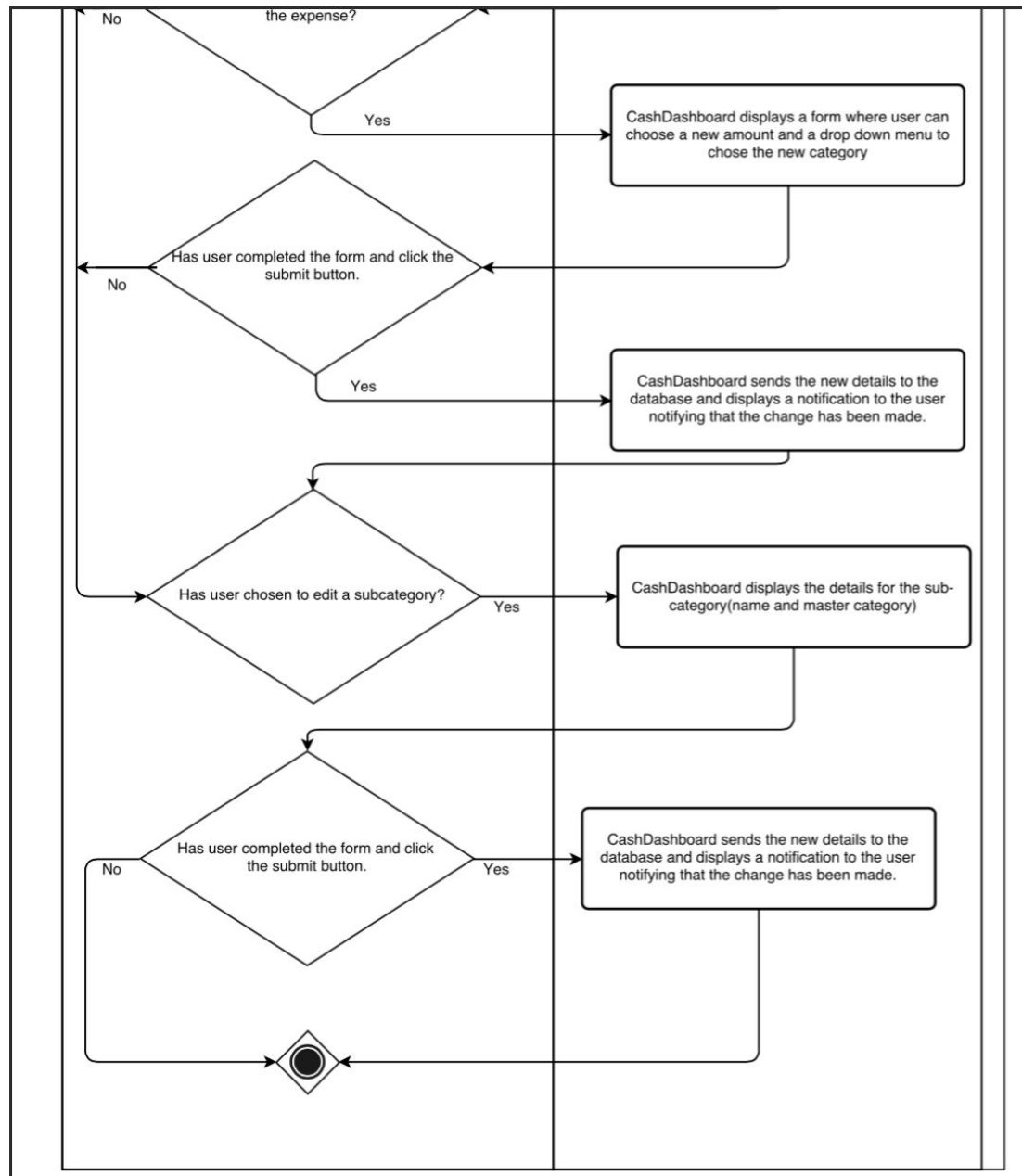
Object_diagram



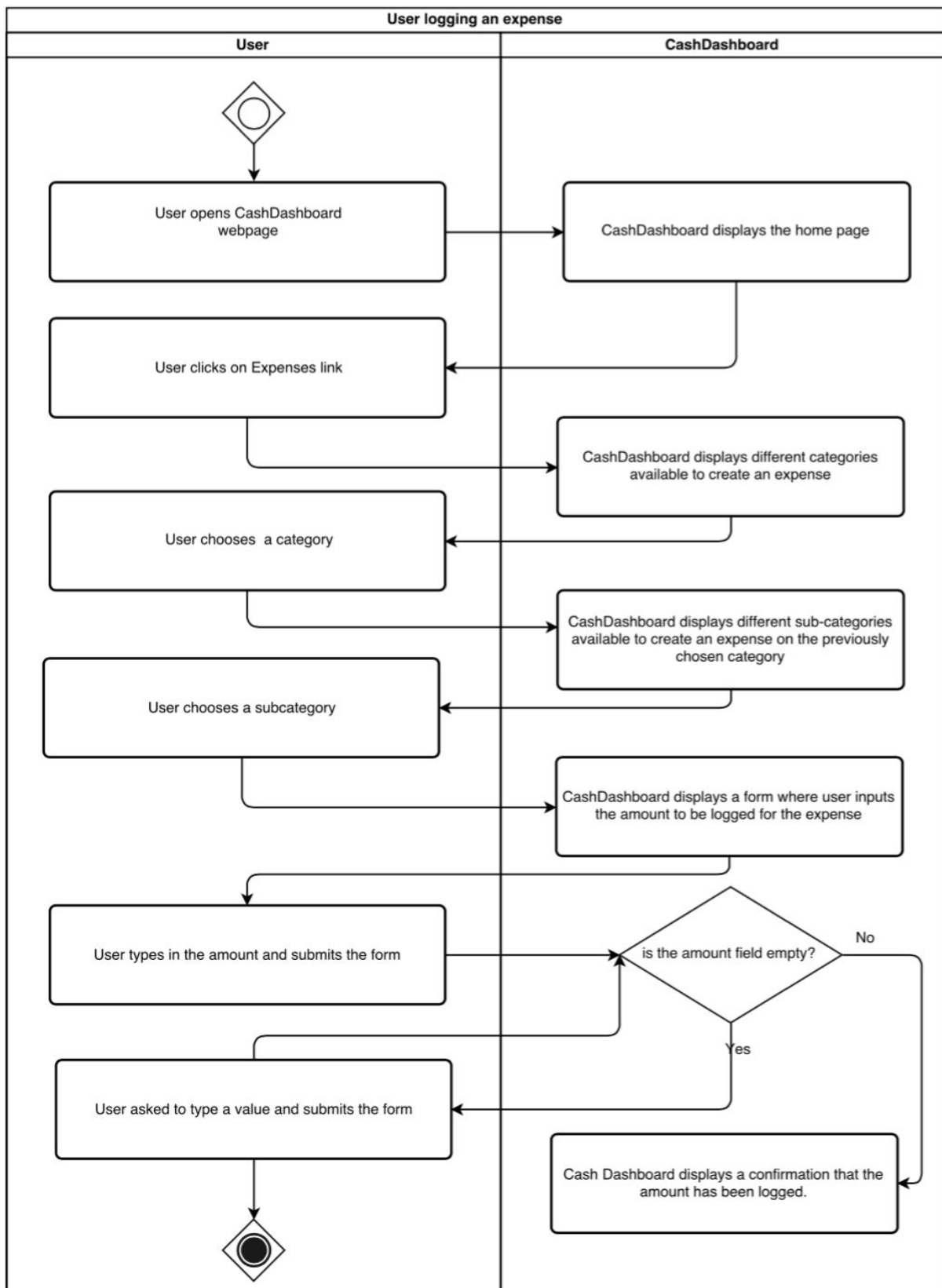
A.D 4 Create an Activity Diagram, based on your Use Case Diagram, Class Diagram and Object Diagram.

Activity Diagram_User_editing_expenses_categories

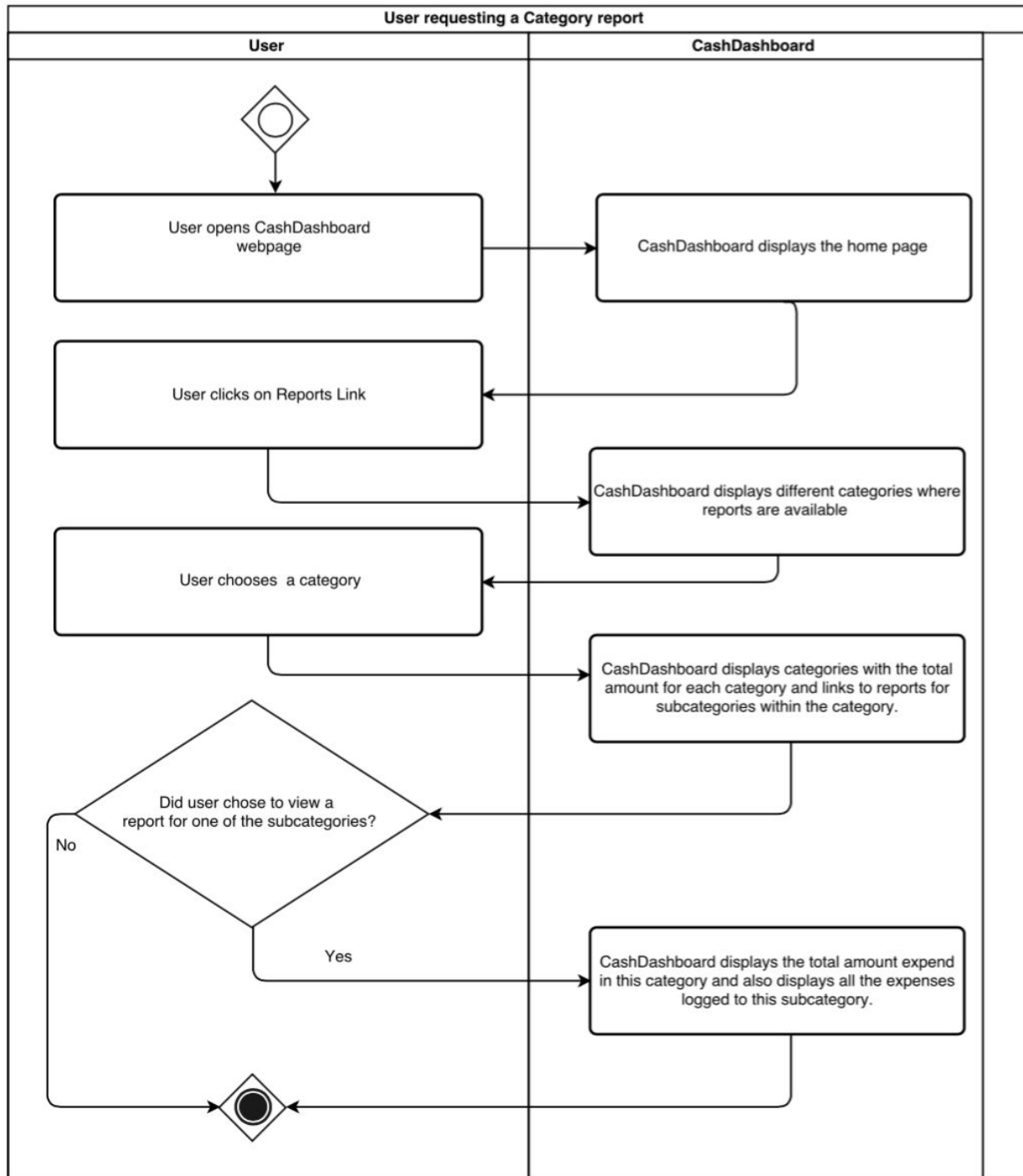




Activity Diagram_User_logging_an_expense

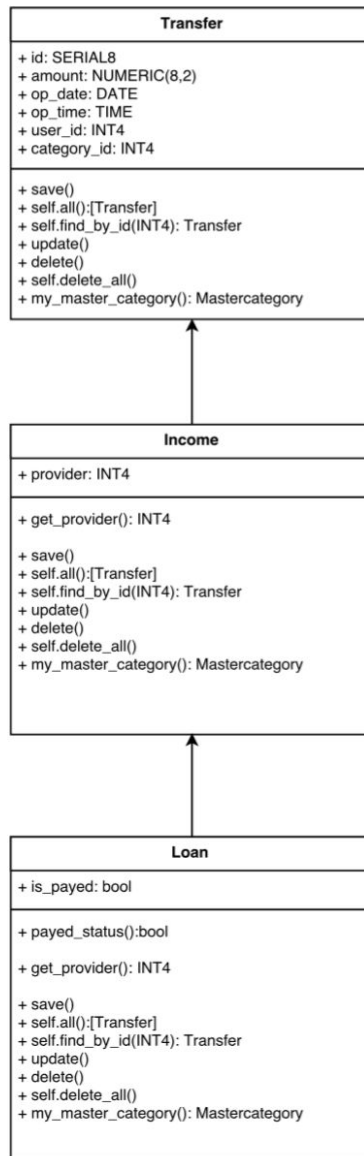


Activity Diagram_User_requesting_a_report



A.D 5 Produce an Inheritance Diagram based on your Class Diagram and Object Diagram.

Inheritance Diagram



A.D 6 Produce an Implementations Constraints plan detailing factors such as:

Implementations_constraints

Topic	Possible Effect of Constraints on Product	Solution
Hardware and software platforms	Web server running in AWS is based on Amazon Linux AMI which will cause migration problems if we decide to host the app in a different cloud provider.	Run the server in a Linux distribution that is available in most of the cloud providers(e.g.: Centos7)
Performance requirements	Our EC2 instance T2.nano may not able to handle large amount of requests which may cause users not been able to use the page and damage the business reputation	Evaluate performance during the next 3 months and decide whether or not the instance needs to be upgraded to a more powerful instance(m1.large)
Persistent storage and transactions	Data Base server AWS RDS has a limit of 6TB size limit which will limit the user base to be between 20.000 to 23.000 users.	Implement a distributed data base system such as Apache Cassandra.
Usability	Web app does not work properly on versions of Internet Explorer lower than v9, according to marketing 2% of users use MS explorer.	Implement css rules to mitigate problems when displaying to said browser and versions.
Budgets	The £20 per month budget to run the app may not be enough if we get more than 20 users running the app regularly.	Change the business model in order to get the costs covered.
Time limitations	The project needs to be finished in one week and there is the possibility of not being able to implement all the functionalities planned at the start of the project which might delay the product launch day	We should focus on having a balanced product where functionality, usability and design have the same priority.

Implementations_constraints

Topic	Possible Effect of Constraints on Product	Solution
Hardware and software platforms	Web server running in AWS is base on Amazon Linux AMI which may cause some trouble if we decide to host the app in a different cloud provider.	Run the server in a Linux distribution that is available in most of the cloud providers(e.g.: Centos7)
Performance requirements	Our EC2 instance T2.nano may not able to handle large amount of requests.	Evaluate performance during the next 3 months and decide whether or not the instance needs to be upgraded to a more powerful instance(m1.large)
Persistent storage and transactions	Data Base server AWS RDS has a limit of 6TB size limit.	Implement a distributed data base system such as Apache Cassandra.
Usability	Web app does not work properly on versions of Internet Explorer lower than v9.	Implement css rules to mitigate problems when displaying to said browser and versions.
Budgets	The £20 per month budget to run the app may not be enough if we get more than 20 users running the app regularly.	Change the business model in order to get the costs covered.
Time limitations	The project needs to be finished in one week and there is the possibility of not being able to implement all the functionalities planned at the start of the project.	We should focus on having a balanced product where functionality, usability and design have the same priority.