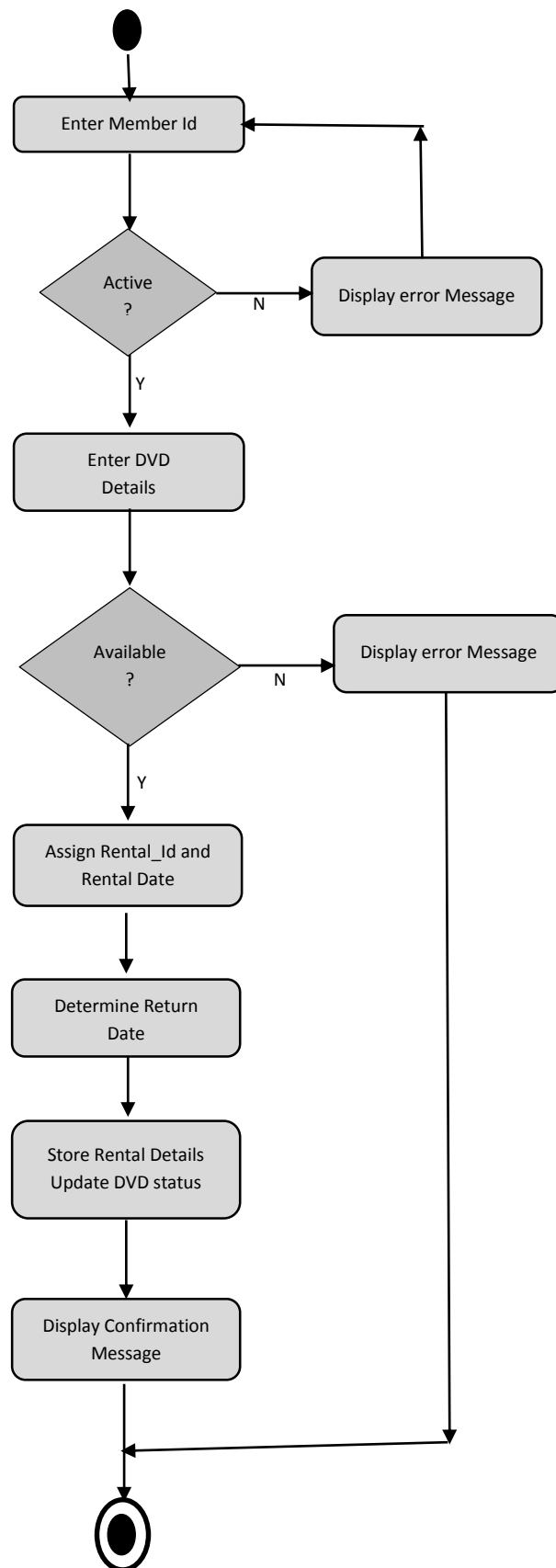


Simple Activity Diagram

Activity: Rent DVD



Use Case Name	Rent DVD	
Use Case Id	0007	
Priority	1	
Source	Staff	
Primary Business Actor	Staff	
Other Participating Actors	Member	
Description	When a member rents a DVD, details of the rental are stored on the system.	
Preconditions	Only registered members may rent a DVD	
Trigger		
Typical Scenario	Actor Action	System Response
	<p>Step 1: The staff member invokes the Rent DVD function.</p> <p>Step 3: The staff member enters the membr_Id</p> <p>Step 6: The staff member enters the required DVD_Id</p> <p>Step 13: The staff member confirms the rental</p>	<p>Step 2: The system displays the UI</p> <p>Step 4: The system validates the Member_Id entered:</p> <ul style="list-style-type: none"> • Is Member_Id entered • Is Member_Id numeric <p>Step 5: The System retrieves the Member details from the Member file and displays on the UI</p> <p>Step 7: The system validates the DVD_Id entered:</p> <ul style="list-style-type: none"> • Is DVD_Id entered • Is DVD_Id numeric <p>Step 8: The System retrieves the DVD details from the DVD file and displays on the UI</p> <p>Step 9: The system assigns a Rental_Id</p> <p>Step 10: The system assigns the Rental_Date</p> <p>Step 11: The system determines the expected return date</p> <p>Step 12: The system displays the rental details on the UI and awaits confirmation</p> <p>Step 14: The system stores the rental details in the Rental File.</p> <p>Step 15: The system updates the DVD status to 'unavailable'</p>

		<p>Step 16: The system increments the number of DVDs on loan by the member by 1</p> <p>Step 17: The system displays a confirmation message.</p>
Alternate Scenarios	Actor Action	System Response
Invalid Member_Id	<p>Step 6: The staff member re- enters the Member_Id</p>	<p>Step 4: The system validates the Member_Id entered:</p> <ul style="list-style-type: none"> • Member_Id is not entered • Member_Id is not numeric <p>Step 5: The system displays the appropriate error message on the user interface</p>
Member Details not found	<p>Step 7: The staff member re- enters the Member_Id</p>	<p>Step 5: The System fails to retrieve the Member details from the Member file and displays on the UI</p> <p>Step 6: The system displays the appropriate error message on the user interface</p>
Invalid DVD_Id	<p>Step 9: The staff member re- enters the DVD_Id</p>	<p>Step 7: The system validates the DVD_Id entered:</p> <ul style="list-style-type: none"> • DVD_Id is not entered • DVD_Id is not numeric <p>Step 8: The system displays the appropriate error message on the user interface</p>
Conclusions	<p>The Rental details have been stored. The DVD status is updated to 'unavailable'. The member has one more DVD rented.</p>	
Post conditions	<p>The DVD may now not be rented.</p>	

Business Rules	Member must be an active member Member must not have any unpaid fines Member may not exceed limit of 5 DVDs on loan DVD must be 'available'
Implementation Constraints	