**1st iteration**

**Diagram

Description automatically generated**

This Use Case shows how the user “Movie-watcher”, who is the biggest end user, uses the app to search for a movie.

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| **USE CASE** | | 1 | Movie-watcher searching for movie. | |
| **Description of Goal in Context** | | Movie-watcher can find the desired movie. | | |
| **Preconditions** | | Movie-watcher has a movie in mind.  Movie-watcher would like to find out information on the movie.  Movie-watcher has access to the internet. | | |
| **Post Conditions, Success End Condition** | | Movie-watcher successfully finds the correct movie. | | |
| **DESCRIPTION** | | Movie-watcher will have a movie in mind and they would like to know information on the movie. They will have to search for the movie in the app’s search bar, and the system will provide information on the movie name, description, actors, critic reviews, ratings, duration. This section is the main section as the movie-watcher can purchase a ticket here. | | |
| **Main Flow** | | | | |
| **Step** | **Action** | | | **Alternate** |
| 1.1 | Movie-watcher inputs the movie name. | | |  |
| 1.2 | The system app searches for the movie**.** | | |  |
| 1.3 | The system loads all possible movies. | | | E.F.1.3 |
| 1.4 | Movie-watcher selects their desired movie. | | |  |
| 1.5 | The system loads the movie along with all the information. | | |  |
| 1.6 | The system updates movie-watcher’s search history | | |  |
| 1.7 | End Use Case | | |  |
|  | | | | |
| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.1.3** | | | **Alternate** |
| 1.3.1 | The system states that the movie name they entered is wrong/does not exist in the database. | | |  |
| 1.3.2 | The system prompts the movie-watcher to enter the name of the movie correctly. | | |  |
| 1.3.3 | Back to Main Flow Step 1.2 | | | M.F.1.2 |

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| **RELATED INFORMATION** | Use Case: 1 | Using the system to find movie information |
| **Priority:** | High priority as it gives the user the chance to see if they want to pay for and watch this movie, this is also the main section where most features are available. | |
| **Product: Performance** | Quick response time.  The system needs to show the information within 1 minute of selecting the movie. | |

Diagram

Description automatically generated**2nd iteration**

The diagram below shows the various features/Use Cases available to the user “Movie-watcher”.

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| **USE CASE** | | 2 | Movie-watcher finds cinema location | |
| **Description of Goal in Context** | | Movie-watcher can find which cinema is closest to them using google maps. | | |
| **Preconditions** | | Movie-watcher has a cinema in mind.  Movie-watcher has internet access.  Movie-watcher has allowed location access.  Movie-watcher has google maps. | | |
| **Post Conditions, Success End Condition** | | Movie-watcher successfully finds a cinema to watch the movie. | | |
| **DESCRIPTION** | | The app will allow the movie-watcher to find any cinema, within their county. This can be done using a search engine. The movie-watcher will be given the choice to open the cinema location in google maps if they have enabled location access. The movie-watcher can find this option in the “Movie tape” icon, at the bottom of the homepage. | | |
| **Main Flow** | | | | |
| **Step** | **Action** | | | **Alternate** |
| 2.1 | The sytsem prompts the movie-watcher to search for cinema name. | | |  |
| 2.2 | Movie-watcher types cinema name | | |  |
| 2.3 | The system returns a page with all possible cinemas, in order showing the cinema closest to the movie-watcher. | | | E.F.2.3 |
| 2.4 | Movie-watcher selects their desired cinema. | | |  |
| 2.5 | The system shows the movie-watcher all the movies the selected cinema is showing. | | |  |
| 2.7 | The system prompts the movie-watcher to select the option to view the cinema location in google maps. | | | E.F.2.7 |
| 2.8 | Movie-watcher selects “OK”. | | |  |
| 2.9 | The system leads the movie-watcher to google maps. | | |  |
| 2.10 | The system updates the movie-watcher‘s cinema selection history. | | |  |
| 2.11 | End Use Case | | |  |
|  | | | | |
| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.2.7** | | | **Alternate** |
| E.F.2.7.1 | The system states that the movie-watcher must enable location access. | | |  |
| E.F.2.7.2 | The movie-watcher enables location access. | | |  |
| E.F.2.7.3 | Back to Main Flow Step 2.6 | | | M.F.2.6 |
|  |  | | |  |
| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.2.3** | | | **Alternate** |
| E.F.2.3.1 | The system states that the movie-watcher entered an invalid cinema. | | |  |
| E.F.2.3.2 | The system prompts the movie-watcher to re-try. | | |  |
| E.F.2.3.3 | Movie-watcher enters valid cinema name. | | |  |
| E.F.2.3.4 | Back to main flow Step 2.2 | | | M.F.2.2 |

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| **RELATED INFORMATION** | Use Case: 2 | Using the system to find cinema/cinema location. |
| **External: Legislation** | Safety and privacy precautions need to be taken as this involves the users location. | |
| **Channels to actors** | Database that holds all the cinemas available. | |

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| **USE CASE** | | 5 | Movie-watcher uploading a comment. | |
| **Description of Goal in Context** | | Movie-watcher can upload a comment in the comment section. | | |
| **Preconditions** | | Movie-watcher has an account.  Movie-watcher has internet access. | | |
| **Post Conditions, Success End Condition** | | Movie-watcher successfully can leave a comment in the comment section. | | |
| **DESCRIPTION** | | There will be a comment section where users can have discussions with each other about the movie and share their opinions. The movie-watcher must have an account to do so. This section can be found at the bottom of the homepage, by clicking on the “comment” icon and searching for the movie the movie-watcher wishes to comment on. | | |
| **Main Flow** | | | | |
| **Step** | **Action** | | | **Alternate** |
| 5.1 | The system prompts the movie-watcher to search for the movie they wish to comment on. | | |  |
| 5.2 | Movie-watcher enters movie title. | | |  |
| 5.3 | The system loads page with movie information and comment section underneath. | | |  |
| 5.4 | Movie-watcher clicks on the text field and starts typing. | | |  |
| 5.5 | Movie-watcher clicks on the “comment” button to upload the comment. | | |  |
| 5.6 | The system uploads the comment along with other comments. | | | E.F.5.6 |
| 5.7 | The system updates comment section. | | |  |
| 5.8 | End Use Case | | |  |
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| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.5.6** | | | **Alternate** |
| E.F.5.6.1 | The system states that the movie-watcher can’t upload the comment because the movie-watcher must log into account. | | |  |
| E.F.5.6.2 | The movie-watcher logs into account. | | |  |
| E.F.5.6.3 | Back to Main Flow Step 5.5 | | | M.F.5.5 |

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| **RELATED INFORMATION** | Use Case: 5 | Using the system to upload a comment. |
| **Product: Efficiency** | High level of memory to store all the different comments. | |

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| **USE CASE** | | 6 | Movie-watcher finding similar movie to their desired book. | |
| **Description of Goal in Context** | | Movie-watcher can upload an image of book from their gallery and the system finds a similar movie. | | |
| **Preconditions** | | Movie-watcher has a book.  Movie-watcher enabled camera permission.  Movie-watcher enabled gallery access permission.  Movie-watcher needs to have an account.  Movie-watcher has internet access. | | |
| **Post Conditions, Success End Condition** | | The system successfully returns a movie that has a similar/the same description to the book movie-watcher uploaded. | | |
| **DESCRIPTION** | | The movie-watcher can upload a photo of a book onto the app. They can do so by taking a photo on their phone or selecting an image from their gallery. The purpose of this is to allow the movie-watcher to find a movie that has a similar description to the book they uploaded, or the movie version of the book. This is successful when the system reads the title of the book from the image and searching the database. This section can be found at the bottom of the home page by clicking on the “Book” icon. | | |
| **Main Flow** | | | | |
| **Step** | **Action** | | | **Alternate** |
| 6.1 | The system asks if the movie-watcher wishes to allow access to all photos in their gallery or if they wish to select the photos the system is allowed to access. | | |  |
| 6.2 | Movie-watcher selects their choice | | |  |
| 6.3 | The system prompts the movie-watcher to upload an image of the book from gallery. | | | E.F.6.3 |
| 6.4 | Movie-watcher uploads the image of the book. | | |  |
| 6.5 | The system searches the database for a movie with a similar description, from reading the book title. | | | E.F.6.5 |
| 6.6 | The system returns all possible movies. | | |  |
| 6.7 | The movie-watcher selects desired movie. | | |  |
| 6.8 | The system updates movie-watcher’s book upload history. | | |  |
| 6.9 | End Use Case | | |  |
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| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.6.3** | | | **Alternate** |
| E.F.6.3.2 | The system prompts the movie-watcher to log into account in order to upload an image. | | |  |
| E.F.6.3.3 | The movie-watcher logs into account. | | |  |
| E.F.6.3.4 | Back to Main Flow Step 6.2 | | | M.F.6.2 |
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| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.6.5** | | | **Alternate** |
| E.F.6.5.1 | The system states that the image the movie-watcher uploaded isnt clear. | | |  |
| E.F.6.5.2 | The system prompts the movie-watcher to upload another image. | | |  |
| E.F.6.5.3 | Back to Main Flow Step 6.4 | | | M.F.6.4 |

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| **RELATED INFORMATION** | Use Case: 6 | Using the system to find movie similar to a book. |
| **Product: Efficiency** | High amount of memory usage as the system needs to hold all the movies similar to the desired book. | |
| **Channels to actors** | Database to hold all the movies | |

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| **USE CASE** | | 7 | Movie-watcher changing the movie plot. | |
| **Description of Goal in Context** | | Movie-watcher will have options to choose from that will change the plot of the movie. | | |
| **Preconditions** | | Movie-watcher is watching a movie.  Movie-watcher needs internet access.  Movie-watcher must have an account. | | |
| **Post Conditions, Success End Condition** | | Movie-watcher successfully changes the movie’s plot. | | |
| **DESCRIPTION** | | The movie can offer multiple choice options during the film that can change the plot or a situation. The options will be available on the movie-watcher’s phone as a pop-up, as they are watching the movie. The movie-watcher can’t watch the movie without an account. The movie-watcher can find the movies that have this feature in a separate section. The system only offers a limited number of action movies in this feature. This can be found at the bottom of the homepage, in the “movie tape” icon. | | |
| **Main Flow** | | | | |
| **Step** | **Action** | | | **Alternate** |
| 7.1 | Movie-watcher selects a movie to watch. | | | E.F.7.1 |
| 7.2 | The system plays the movie. | | |  |
| 7.2 | The system automatically pauses the movie. | | |  |
| 7.3 | The system provides the movie-watcher with two options on the screen to change the plot. | | |  |
| 7.4 | Movie-watcher selects their desired option. | | |  |
| 7.5 | The system resumes the movie with the new changed plot. | | |  |
| 7.6 | The system updates the movie-watcher’s database with new plot. | | |  |
| 7.7 | End Use Case | | |  |
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| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.7.1** | | | **Alternate** |
| E.F.7.1.1 | The system states that the movie-watcher must log into account. | | |  |
| E.F.7.1.2 | Movie-watcher logs into account. | | |  |
| E.F.7.1.3 | Back to Main Flow Step 7.1 | | | M.F.7.1 |
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| **RELATED INFORMATION** | Use Case: 7 | Using the system to change the movie’s plot. |
| **Priority:** | High priority as this is a big part of the augmented reality section of the system. | |
| **Product: Performance** | Quick response time.  The system needs to respond quickly with no interruptions so the movie runs smoothly before and after the user makes a choice. | |

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| **USE CASE** | | 8 | Connecting to VR headset | |
| **Description of Goal in Context** | | Movie-watcher can connect to VR headset and choose which landscape to be in. | | |
| **Preconditions** | | Movie-watcher has enabled camera access.  Movie-watcher has internet access.  Movie-watcher must have an account. | | |
| **Post Conditions, Success End Condition** | | Movie-watcher successfully connects and selects which movie landscape to be in. | | |
| **DESCRIPTION** | | Movie-watcher can connect to the VR headset by scanning a QR code through the app. The movie-watcher will then be given a selection of movie landscapes they wish to be in, on their phone. The movie-watcher will select one of the many options and put the VR set on and enjoy. This option is found by clicking on the “movie tape” icon and then the “VR” option. The movie-watcher will obtain the VR headset from the cinema. | | |
| **Main Flow** | | | | |
| **Step** | **Action** | | | **Alternate** |
| 8.1 | The system prompts the movie-watcher to scan the QR code located on the VR headset. | | | E.F.8.1 |
| 8.2 | Movie-watcher scans QR code. | | | E.F.8.2 |
| 8.3 | The system is now connected to the VR headset. | | |  |
| 8.4 | The system prompts the movie-watcher to choose one of the movie landscape selections | | |  |
| 8.5 | Movie-watcher selects their desired option. | | |  |
| 8.6 | End Use Case | | |  |
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| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.8.1** | | | **Alternate** |
| E.F.8.1.1 | The system states that the movie-watcher has camera access disabled. | | |  |
| E.F.8.1.2 | The system prompts the movie-watcher to enable camera access. | | |  |
| E.F.8.1.3 | Movie-watcher enables camera access. | | |  |
| E.F.8.1.4 | Back to Main Flow Step 8.1 | | | M.F.8.1 |
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| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.8.2** | | | **Alternate** |
| E.F.8.2.1 | The system states that the movie-watcher must log into account. | | |  |
| E.F.8.2.2 | Movie-watcher log into account. | | |  |
| E.F.8.2.3 | Back to Main Flow Step 8.1 | | | M.F.8.1 |
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| **RELATED INFORMATION** | Use Case: 8 | Using the system to connect to VR headset. |
| **Organisation: Delivery** | deploy before summer as that is when most students have the most time to attend the cinema and give time to their own interests. | |

**3rd iteration**

Diagram

Description automatically generated

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| **USE CASE** | | 3 | Movie-goer purchases a movie ticket. | |
| **Description of Goal in Context** | | Movie-goer can purchase a ticket for their desired time. | | |
| **Preconditions** | | Movie-goer has a movie in mind they want to watch, which they have already searched and selected.  Movie-goer has already selected a cinema.  Movie-goer has internet access.  Movie-goer gave permission for in-app purchases.  Movie-goer has an account. | | |
| **Post Conditions, Success End Condition** | | Movie-goer successfully purchases a ticket for their desired movie and time. | | |
| **DESCRIPTION** | | The app will allow the movie-goer to buy tickets for their desired movie and time. The movie-goer will receive a confirmation email for the purchase. This can be accessed by selecting the “movie tape” icon and searching for a movie and scrolling to the bottom of the page and select “purchase ticket”. | | |
| **Main Flow** | | | | |
| **Step** | **Action** | | | **Alternate** |
| 3.1 | The system prompts the movie-goer to select which cinema and time they’d like to watch the movie. | | |  |
| 3.2 | Movie-goer selects the desired time and cinema. | | |  |
| 3.2 | The system saves the time and confirms the information | | |  |
| 3.5 | The system checks if tickets are available. | | |  |
| 3.6 | The system updates the movie-goer’s database. | | |  |
| 3.7 | The system prompts the movie-goer to make payement. | | | E.F.3.7 |
| 3.8 | Movie-goer makes payement | | | E.F.3.8 |
| 3.9 | The system sends a confirmation to the movie-goer’s email with details of the purchase. | | |  |
| 3.10 | End Use Case | | |  |
| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.3.7** | | | **Alternate** |
| E.F.3.7.1 | The system prompts the movie-goer to log into account. | | |  |
| E.F.3.7.2 | Movie-goer logs into account. | | |  |
| E.F.3.7.3 | Back to Main Flow Step 3.6 | | | M.F.3.6 |
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| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.3.8** | | | **Alternate** |
| E.F.3.8.1 | The system states that there was an error in payment and prompts the movie-goer to retry payment. | | |  |
| E.F.3.8.2 | Movie-goer checks for the problem. | | |  |
| E.F.3.8.3 | Back to Main Flow Step 3.7 | | | M.F.3.7 |
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| **RELATED INFORMATION** | Use Case: 3 | Using the system to purchase cinema ticket. |
| **Priority:** | High priority as this use case involves the users money. | |
| **Product: Reliability** | Highly reliable over a long period of time. It must operate correctly 99.995% of the time. | |
| **Open issues** | Not sure yet if we will email a QR code to the user so the cinema can scan it before allowing them to enter the movie, or if showing a reciept will suffice. | |

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| **USE CASE** | | 4 | Movie-goer refunding a ticket | |
| **Description of Goal in Context** | | Movie-goer can refund a ticket | | |
| **Preconditions** | | Movie-goer has internet access.  Movie-goer has an email.  Movie-goer has previously purchased a ticket atleast 24 hours before showing time.  Movie-goer has the card they made the purchase with.  Movie-goer has an account. | | |
| **Post Conditions, Success End Condition** | | Movie-goer successfully returns a ticket. | | |
| **DESCRIPTION** | | The app will allow the movie-goer to refund a ticket 24 hours before the showing time. It cannot be refunded within 24 hours of the showing. The movie-goer must also have proof of purchase and the same card they bought the ticket with. This can be accessed by locating the “profile” icon at the bottom of the homepage, and selecting “previous purchases” and then selecting the ticket the movie-goer wishes to return. | | |
| **Main Flow** | | | | |
| **Step** | **Action** | | | **Alternate** |
| 4.1 | Movie-goer selects “return ticket” under their purchase. | | | E.F.4.1 |
| 4.2 | The system prompts the movie-goer to give a reason for refund. | | |  |
| 4.3 | The system prompts the movie-goer to confirm the refund. | | |  |
| 4.4 | Movie-goer selects “yes”. | | |  |
| 4.5 | The system confirms and refunds the movie-goer ‘s ticket. | | |  |
| 4.6 | The system sends email to the movie-goer, confirming the refund. | | |  |
| 4.7 | End Use Case | | |  |
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| **EXCEPTIONS or ERROR Flow Description** | | | | |
| **Step** | **E.F.4.1** | | | **Alternate** |
| E.F.4.1.1 | The system states that the movie-goer cannot refund the ticket as the showing is within/less than 24 hours, or the refund period has expired. | | |  |
| E.F.4.1.2 | The system navigates the movie-goer to prevous purchases page. | | |  |
| E.F.4.1.3 | Back to Main Flow Step 4.1 | | | M.F.4.1 |
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| **RELATED INFORMATION** | Use Case: 4 | Using the system to refund a ticket. |
| **Product: Reliability** | Highly reliable over a long period of time. It must operate correctly 99.995% of the time. | |
| **External: Legislation** | Privacy and safety precautions need to be taken as this involves the user’s financial details. | |

**Analysis Classes for 3rd iteration**

**Analysis class for purchasing a ticket**

**Timeline

Description automatically generated with low confidence**

**Timeline

Description automatically generated with medium confidenceAnalysis class for returning a ticket**

Diagram

Description automatically generated**Week 6**

Diagram, text

Description automatically generated

Diagram

Description automatically generated