

Exemplar: Create a use case diagram

This document presents an exemplar solution to the lab, “Create a use case diagram.” Please keep in mind that this is just one point of view and not a definitive solution.

Solution

Task 1: Identify the actors

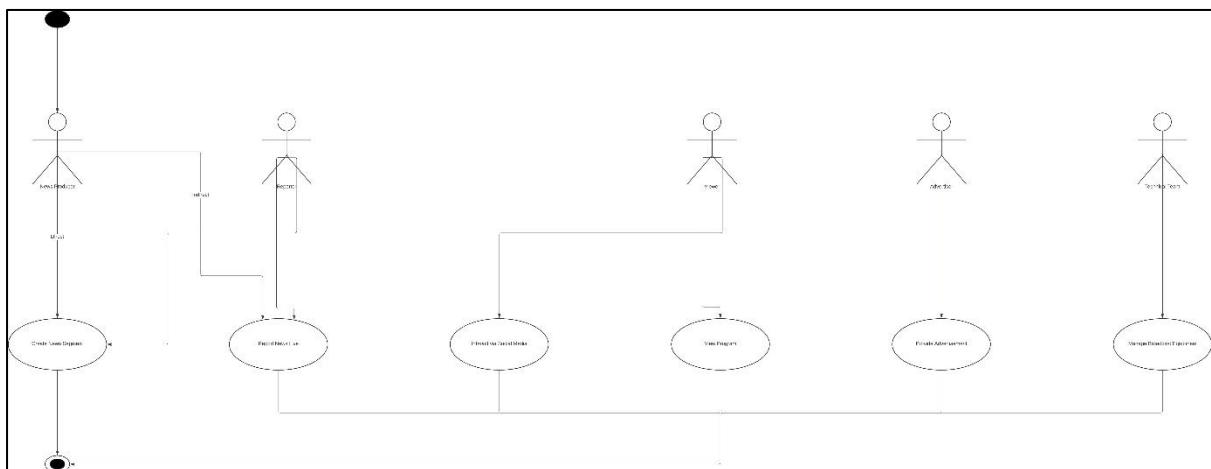
Actor	Primary/Secondary	Role	Interactions
News producer	Primary	Oversees the content creation for the news program, schedules segments, and coordinates with reporters to ensure smooth broadcast	<ul style="list-style-type: none">• Create news segment: Engages in creating and planning segments• Coordinate resources: Works with the technical team for required resources
Reporter	Primary	Gathers news stories, conducts interviews, and presents news live on air as the face of the news channel	<ul style="list-style-type: none">• Report news live: Presents stories and updates during broadcasts• Contribute to segment creation: Helps in developing content for segments
Viewer	Secondary	End consumers of the news program who watch broadcasts and engage with the channel through social media	<ul style="list-style-type: none">• View program: Watches the news program• Interact via social media: Provides feedback that influences content
Technical team	Secondary	Manages broadcast equipment and software necessary for production, ensuring smooth, issue-free operation	<ul style="list-style-type: none">• Manage broadcast equipment: Sets up, maintains, and troubleshoots

			broadcast technology
Advertiser	Secondary	<p>Provides financial support to the news channel in exchange for commercial slots during broadcasts.</p> <ul style="list-style-type: none"> • Provide advertisement: Submits ads and negotiates ad placement within programming 	

Task 2: Define the use case

Use case	Description
Create news segment	The news producer outlines and develops news segments for the program. This includes determining topics, gathering resources, and assigning reporters.
Report news live	Reporters deliver news segments live on-air, presenting information to viewers in real-time, including breaking news, interviews, and special reports.
View program	Viewers watch the live broadcast of the news program, which serves as their primary interaction point with the channel.
Interact via social media	Viewers engage with the program on social media, providing feedback and comments, and participating in live discussions. This helps gauge viewer sentiment and preferences.
Manage broadcast Equipment	The technical team ensures that all equipment, including cameras, sound equipment, and broadcasting software, functions correctly before and during broadcasts.
Provide advertisement	Advertisers submit advertisements for airing during commercial breaks, often negotiating timing and placement within the broadcast.

Task 3: Create a use case diagram



Task 4: Define relationships between actors and use cases

Actor	Use case	Relationship
News Producer	Create news Segment	Directly interacts by outlining and developing news segments.
	Report news live	Indirectly interacts by coordinating with reporters to ensure smooth reporting.
Reporter	Report news live	Heavily involved, delivering news segments live on-air.
	Create news segment	May contribute to the development of news segments.
Viewer	View program	Primarily engages with the live broadcast as the main interaction point.
	Interact via social media	Has an interactive role, providing feedback that influences content decisions.
Technical team	Manage broadcast equipment	Critical to ensuring all technical aspects are handled efficiently before and during broadcasts.
Advertiser	Provide advertisement	Solely interacts by submitting ads for airing, which is crucial for the financial support of the channel.

Task 5: Answer the following questions for reflection (Optional)

- What challenges did you face when identifying actors and use cases?

Challenges in identifying actors	Description
Diverse stakeholder roles	Distinguishing between primary and secondary actors is complex, especially when stakeholders have overlapping responsibilities. For example, technical team members may engage with content in ways that blur their primary role.
Understanding interactions	It is difficult to grasp how each actor interacts with the system. Some roles may have indirect involvement, such as viewers influencing content through social media engagement.
Dynamic nature of news production	The fast-paced environment of news production means roles and responsibilities change rapidly, making it challenging to define stable actor roles.
Overlooking supporting actors	Less visible actors, such as social media managers or advertisers, may be neglected despite their crucial roles in content delivery and revenue generation.

Challenges in defining use cases	Description
Identifying key actions	Pinpointing critical use cases is difficult in environments where numerous actions contribute to the overall process.
Complex interactions	The relationships between actors and use cases can be intricate, especially when multiple actors (e.g., reporters, producers, technical teams) are involved.
Balancing functional and non-functional requirements	Ensuring use cases cover both functional (actions taken) and non-functional (system performance) aspects, particularly regarding user experience, can be challenging.
Iterative refinement needs	Refining use cases often requires several iterations and feedback from stakeholders, which can be time-consuming.

2. How does your diagram facilitate understanding of the program's functionality?

Benefits	Description
Visual representation of interactions	The diagram visually maps out actors and their interactions with the system, making it easier to understand roles and system functionality.
Clarification of roles and responsibilities	Clearly defining primary and secondary actors helps stakeholders understand their roles, improving collaboration and coordination.
Identification of key use cases	The use case diagram highlights essential actions taken by each actor, helping stakeholders prioritize functionalities for high-quality news coverage.
Simplifying complex interactions	It breaks down complex interactions into manageable parts, enabling stakeholders to understand how the system works without needing technical expertise.

3. In what ways can the prime-time news channel improve viewer engagement based on your findings?

Strategies	Description
Interactive segments	Introduce real-time polls, Q&A sessions, or social media interactions during broadcasts to foster a sense of community and viewer involvement.
Feedback mechanisms	Establish clear channels for viewers to provide feedback (via social media, apps, or surveys) and use this feedback to adjust content to meet audience preferences.
Customized content	Utilize viewer data to offer personalized news segments or recommendations, including tailored notifications for breaking news in preferred categories.
Enhanced social media integration	Strengthen social media integration by featuring viewer comments and reactions during live broadcasts to increase audience engagement.