



# Qualifiers Round

Post-Secondary Competition 2025



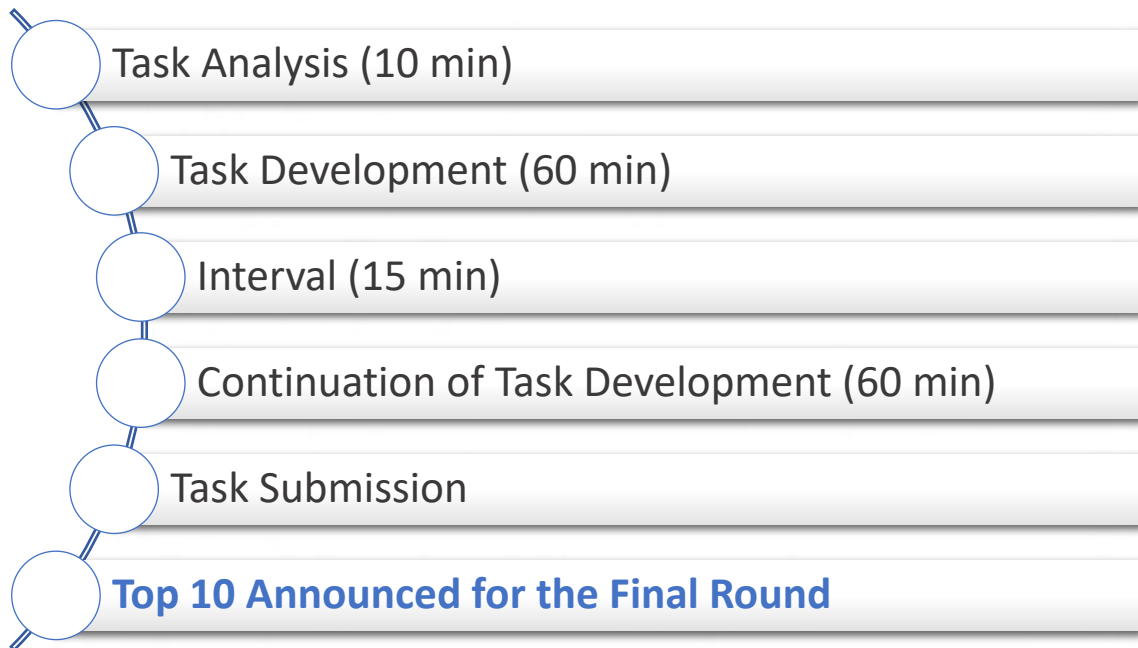
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# Qualifier Round Schedule





## StreamSavr: Smarter Streaming

In today's world of endless streaming options, people often struggle to keep track of what they've watched, what they enjoyed, and what might be worth watching next. From podcasts and tutorials to movies and music, the digital content landscape is more packed and more personal than ever before.

StreamSavr is a new initiative aiming to deliver a lightweight tool that helps everyday users review, organize, and make sense of their past streamed content. The goal is to give users a meaningful snapshot of their streaming habits and assist them in discovering new, relevant content based on their preferences.



As a developer on the StreamSavr prototype team, your challenge is to build the engine that powers this experience using JAVA. You'll be working on an offline prototype application that intelligently handles user interaction, content processing, and insightful reporting within a command-line interface.

This is not just about listing content. It's about helping users analyse, filter, discover, and making their digital content experience smarter and more personal.

## Functionality #1: Home Page

Create an interface with the following options:

=== StreamSavr Menu ===

1. View All Content
2. Search Content by Title
3. Filter Content
4. View Recently Played Content
5. Exit



The program will stop only if the user chooses the 'Exit' option.



On every operation, the system should display clear and readable outputs, and meaningful feedback or error messages.


## Functionality #2: Predefined Content

The system should include several predefined contents as per the Table 1 below.

Title	Type	Duration (min)	Rating (/5)	Last Played
Deep Work Techniques	Podcast	28	4.3	30/05/2025
Classic Rock Hour	Music	60		
The Social Dilemma	Movie	94	4.8	25/05/2025
Home Workout: No Equipment	Tutorial	25	4.4	28/05/2025
Stranger Signals	Series	48		
Quick & Easy Pasta Recipes	Tutorial	18	4.5	
The Daily Global News Recap	Podcast	12	4	31/05/2025
Ambient Focus Music	Music	120		
Planet Earth II: Deserts	Documentary	55	4.9	27/05/2025
Financial Freedom Basics	Podcast	22	4.2	31/05/2025
The Tech Whisperer	Series	42		
Discovering Jazz	Music	45		
How to Paint Landscapes	Tutorial	35	4.5	26/05/2025
The Last Voyage (Live Concert)	Music	105	4.7	30/05/2025
SpaceX and the Future of Travel	Documentary	85		
Learn Spanish: Beginner Level	Tutorial	40	4.6	25/05/2025
Classical Piano Favourites	Music	90		


The Human Brain Decoded	Documentary	60	4.7	29/05/2025
Expendables 3	Movie	115		
Coffee Break True Crime	Podcast	25	4.1	01/06/2025
Morning Motivation	Podcast	15	4.5	29/05/2025
Nature Sounds for Sleep	Music	180		
Mindful Breathing	Tutorial	10		
Mars: The Next Frontier	Documentary	70	4.6	28/05/2025
Breaking Waves	Movie	105	4.4	27/05/2025
Horror Nights	Series	52	4.3	30/05/2025
Eco Talks	Podcast	30		
Kids Lullabies	Music	50	4.8	01/06/2025
Travel Diaries: Tokyo	Documentary	65		
Sci-Fi Storytime	Audiobook	38		
Python for Beginners	Tutorial	48	4.9	01/06/2025
Live Jazz Jam	Music	95		
Crime Scene Analysis	Podcast	35	4.2	31/05/2025
Philosophy Made Easy	Podcast	55		
The Cooking Show	Series	40	4.5	30/05/2025
Virtual Museum Tour	Documentary	60	4	29/05/2025
Comedy Bloopers	Series	25	3.9	28/05/2025
Planet Beats	Music	70	4.6	27/05/2025
Fitness Challenge Week 1	Tutorial	30		
Space Opera: Episode 1	Series	60		

*Table 1: Predefined Content*

 **Note:** For convenience, a word document and a text file with the list of contents will be shared by the invigilator via the Zoom chat panel at the start of the session.

### **Functionality #3: View all Content**

When the user selects this option, your program should display the full list of streaming content available in the system in alphabetical order (A → Z).

 The list should be displayed in a clear tabular format, including Title, Type, Duration, and Rating.

📁 All Available Content:				
Title	Type	Duration	Rating	
Ambient Focus Music	Music	120		
Behind the Code	Documentary	50	4.5	
Brainwaves Explained	Documentary	52		
Classic Rock Hour	Music	60		
Classical Piano Favourites	Music	90		
Coffee Break True Crime	Podcast	25	4.1	
Creative Coding	Tutorial	38	4.7	
Daily Mindfulness Session	Podcast	15		
Deep Work Techniques	Podcast	28	4.3	
Discovering Jazz	Music	45		
Documenting Nature	Documentary	60	4.5	
Earth's Hidden Wonders	Documentary	65		
Expendables 3	Movie	115		

Screenshot 1: Sample interface for Functionality 3

## Functionality #4: Search Content by Title

This feature should:

- Prompt the user to:
  - enter the title of the content they wish to search for, or
  - allow them to return to the Home page.
- Search only within the Title field of the contents.
- Allow for partial matches (e.g., "beat" or "lo" returns results like "Lo-fi Beats"). *However, handling input variations such as "lofi" or "lo fi" matching "Lo-fi Beats" is not a requirement.*
- If one match is found:
  - Display the result in a clear tabular format, including Title, Type, Duration, Rating and Last Played fields.
  - Ask the user to choose from the following options:
    - Play the content → updates the Last Played field with the current date.
    - Rate the content → updates the Rating field.
    - Return to Home Page.
  - Handle invalid input and return to Home page only if the user selects this option.

5. If multiple matches are found:

- Display result in a clear tabular format, including Index Num, Title, Type, Duration, Rating and Last Played fields.
- Results should be in alphabetical order by title (A → Z).
- Index Num should be an AutoNumber starting from 1 and assigned after sorting the list of the results found.
- Ask the user to select a content item by its index.
- Ask the user to choose from the following options:
  - o Play the content → updates the Last Played field with the current date.
  - o Rate the content → updates the Rating field.
  - o Return to Home Page.
- Rating should be a decimal number between 0.0 to 5.0 both inclusive.
- Handle invalid input and return to home page only if selected.

6. Display an appropriate message, if:

- no match is found, or
- the user input is empty (blank or whitespace).

```
== Search Content ==

-----
🔍 Enter content title to search (or type 'home' to return): hello
❌ No content found with the title 'hello'.

-----
🔍 Enter content title to search (or type 'home' to return): Tech

-----
Index  Title                                     Type      Duration  Rating  Last Played
-----
1      Deep Work Techniques                         Podcast    28        4.3     30/05/2025
2      The Tech Whisperer                             Series     42        4.2     01/06/2025
3      Advanced Drawing Techniques                    Tutorial   38        4.2     01/06/2025

Select the content (by index) or type Home to return to Home Page: 6
⚠️ Invalid index selected.

Select the content (by index) or type Home to return to Home Page: 1
What would you like to do with this content?
1. ▶️ Play the content
2. ⭐ Rate the content
3. 🏠 Return to Home Page
Enter your choice: 1
✅ Content played. 'Last Played' updated.

What would you like to do with this content?
1. ▶️ Play the content
2. ⭐ Rate the content
3. 🏠 Return to Home Page
Enter your choice: 2
Enter your rating (0.0 to 5.0): 3.5
✅ Rating updated.

What would you like to do with this content?
1. ▶️ Play the content
2. ⭐ Rate the content
3. 🏠 Return to Home Page
Enter your choice: 3
🏠 Returning to Home Page.
```

Screenshot 2: Sample interface for Functionality 4



## Functionality #5: Filter Content by Type

This feature allows users to narrow down the list of streamed content based on specific type and view the results in a clear, sorted table. It should:

1. Prompt the user to:
  - enter the type of content they wish to filter by, or
  - allow them to return to the home page.
2. The type must be one of the predefined categories: Audiobook, Documentary, Movie, Music, Podcast, Series, or Tutorial. Display an appropriate message if a wrong category is entered.
3. If valid and content of that type exists, prompt the user to choose a sorting option:
  - Title (A → Z)
  - Rating (Highest first)
  - Duration (shortest first)
4. Display the filtered and sorted content in a neat tabular format, including Title, Type, Duration, Rating and Last Played fields.
5. Display an appropriate message, if no content of the selected type is found.
6. Display an appropriate message if an invalid sorting option is selected, and re-prompt the user to choose a valid option.
7. Return to home page only if selected.

```
== Filter Content ==
🔍 Enter content type, such as Music, Podcast, Movie (or type 'home' to return): movie

-----
Choose sorting method:
1. Title (A → Z)
2. Rating (Highest first)
3. Duration (Shortest first)
Enter option (1-3): 6
⚠ Invalid sort option. Try again!

-----
Choose sorting method:
1. Title (A → Z)
2. Rating (Highest first)
3. Duration (Shortest first)
Enter option (1-3): 2

🎬 Filtered and Sorted Content:

+-----+-----+-----+-----+-----+
| Title           | Type   | Duration (min) | Rating (/5) | Last Played   |
+-----+-----+-----+-----+-----+
| The Social Dilemma | Movie | 94             | 4.8         | 25/05/2025   |
+-----+-----+-----+-----+-----+
| Breaking Waves    | Movie | 105            | 4.4         | 27/05/2025   |
+-----+-----+-----+-----+-----+
| Expendables 3     | Movie | 115            |             |               |
+-----+-----+-----+-----+-----+

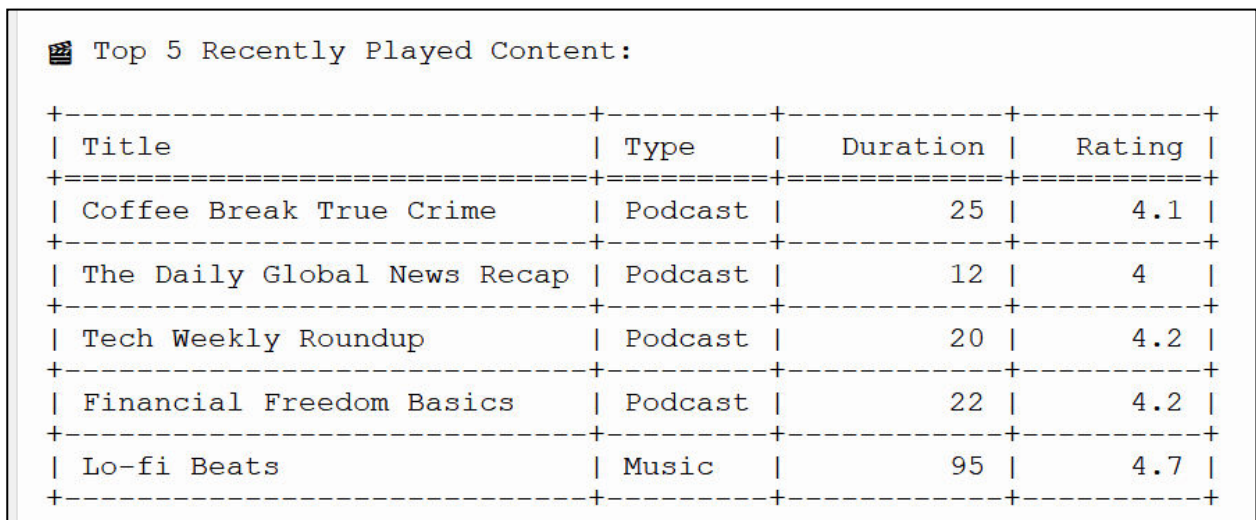
== Filter Content ==
🔍 Enter content type, such as Music, Podcast, Movie (or type 'home' to return):
```

Screenshot 3: Sample interface for Functionality 5

## Functionality #6: View Recently Played Content

This feature displays the most recently played content based on when it was last accessed. It should:

1. Retrieve content that has been played/watched.
2. Sort the content in descending order based on the "Last Played" date (most recent first).
3. Display only the five (5) most recent entries.
4. Present the results in a clear tabular format showing Title, Type, Duration, and Rating fields.



```

📺 Top 5 Recently Played Content:
+-----+-----+-----+-----+
| Title                               | Type    | Duration | Rating |
+-----+-----+-----+-----+
| Coffee Break True Crime             | Podcast | 25       | 4.1    |
+-----+-----+-----+-----+
| The Daily Global News Recap          | Podcast | 12       | 4      |
+-----+-----+-----+-----+
| Tech Weekly Roundup                  | Podcast | 20       | 4.2    |
+-----+-----+-----+-----+
| Financial Freedom Basics            | Podcast | 22       | 4.2    |
+-----+-----+-----+-----+
| Lo-fi Beats                          | Music   | 95       | 4.7    |
+-----+-----+-----+-----+

```

Screenshot 4: Sample interface for Functionality 6

## Functionality #7: Validation Processes

In addition to the validation processes mentioned in the previous features, your program must implement the following validations:

1. Empty user input should be ignored and not treated as invalid. The program should re-prompt the user to enter the requested data/option.
2. All user inputs should be case-insensitive to improve usability and prevent errors due to case mismatches.
3. Prevent any runtime errors due to invalid user actions.

Name the class containing the main method **RunApp**.

Submit your program in a folder named **StreamSavr\_name\_surname**  
*such as StreamSavr\_john\_abela*

## Assessment Rubric

Program Runs	User Friendly/Experience Interface		Proper use of Comments		Proper Conventions (Camel Case, meaningful var names etc.)		User Input	
Proper Filename	Suitable Prompts / Messages Displayed		Pre-Load Content List		View all Content		Search for Title	
Filter Content by Type	Show Results in Tabular Format	Proper use of Data Structures		Modular Code		Code Efficiency		Other Functions/Flow
Sorting								
Alphabetical Order (View all)	Alphabetical Order (Search)	Alphabetical Order (Filter)	By Rating (Filter)	By Duration (Filter)	Recently Viewed (most recent first)			
Validations								
Valid Option (Home Page)	Valid Option (Search)	Valid Option (Filter)	Valid Type (Music, Movie, Series, etc)	Valid Rating (0.0 – 5.0)	Valid Content Index (Filter)	Ignore Empty Input	User Input Case Sensitivity	Avoid Runtime Errors
0 – Not Satisfactorily   1- Partly Satisfactorily   2- Entirely Satisfactorily								
Maximum Score: 62 + 2 for every extra feature								



# code sprint

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