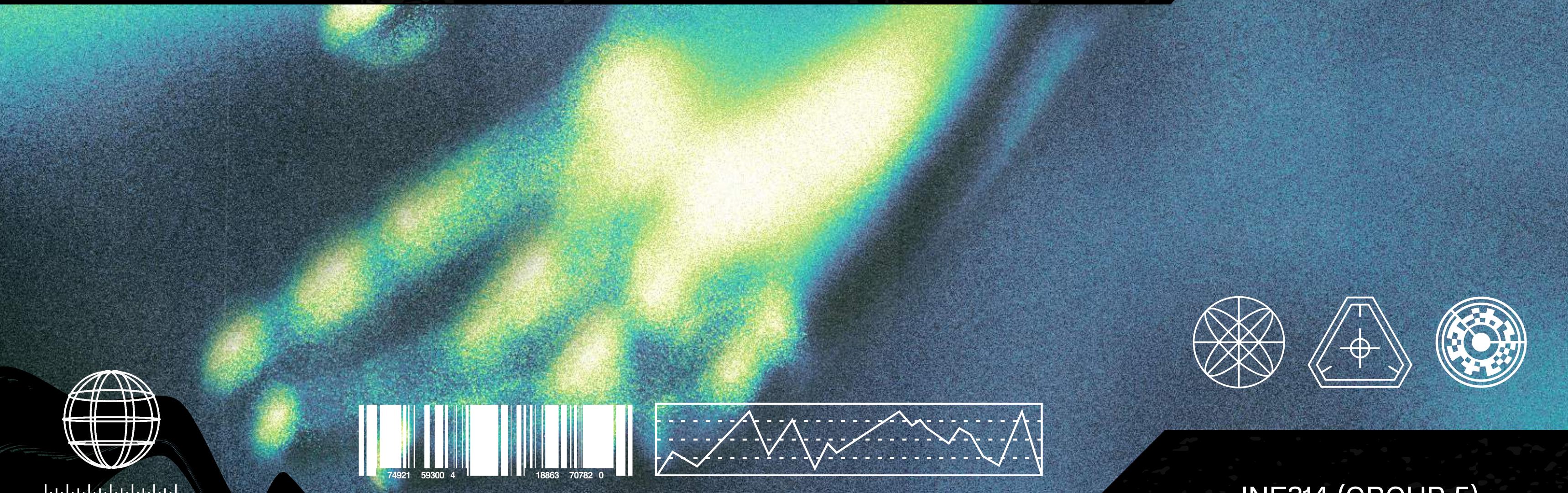
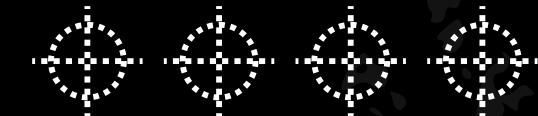


DATA STRUCTURES

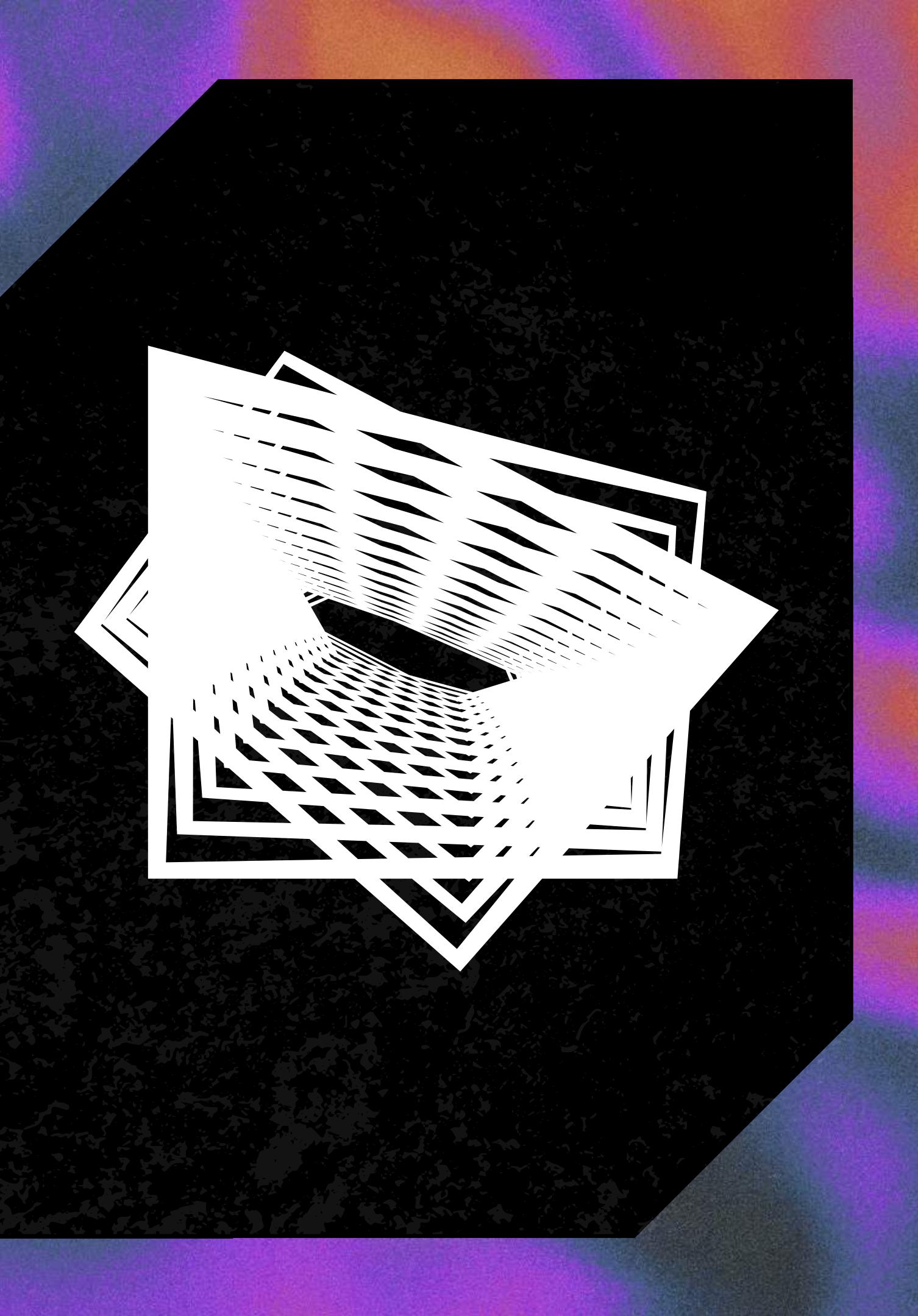
FINAL PROJECT



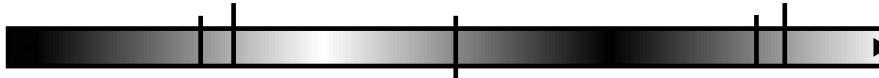
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INF214 (GROUP 5)



REAL LIFE APPLICATION



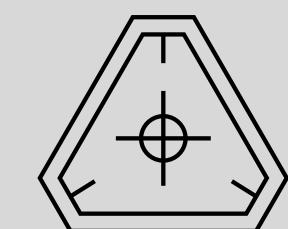
& DATA STRUCTURES USED:

REAL LIFE APPLICATION:

Music App / Player

DATA STRUCTURE USED:

LinkedList Implementation of Queue

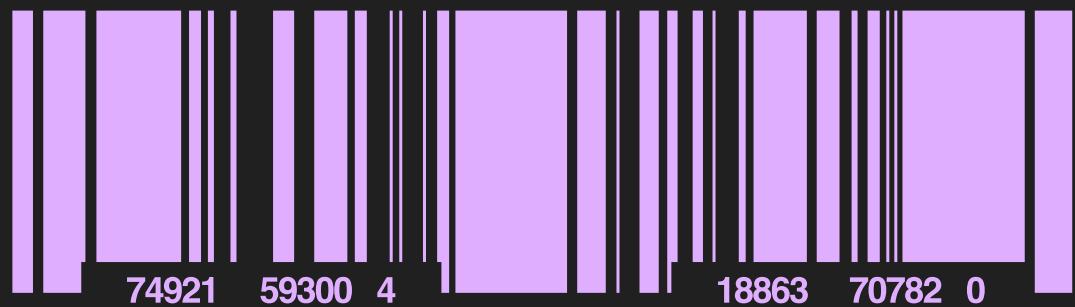
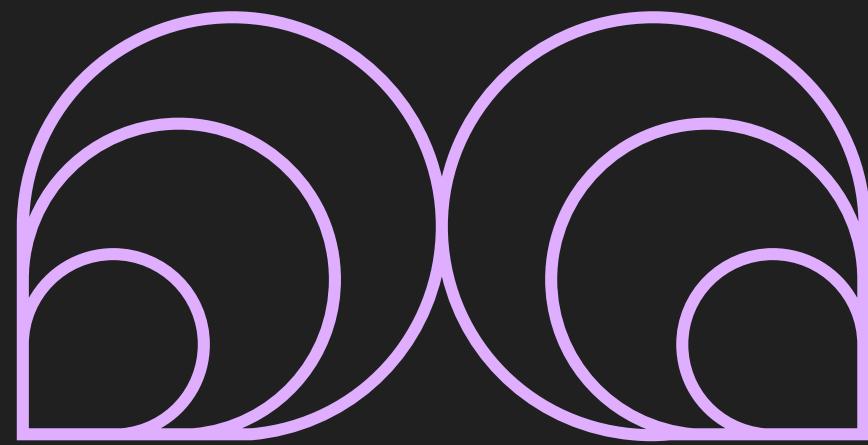
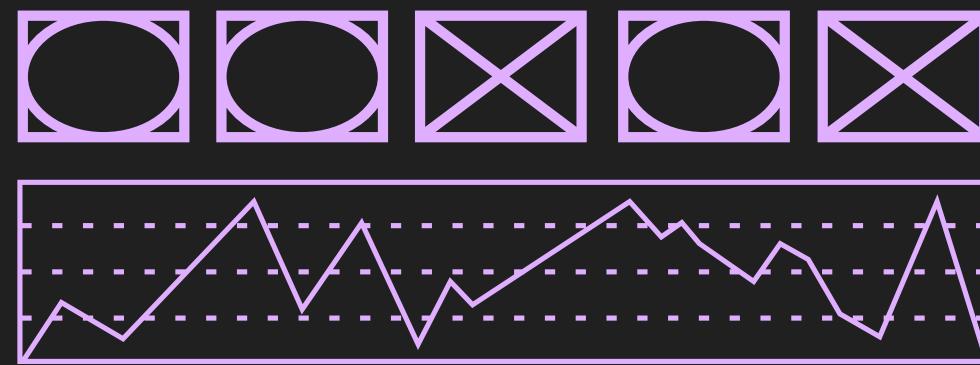


LINKEDLIST IMPLEMENTATION OF QUEUE:



Our group chose queue with a manual implementation using LinkedList as our main type of data structure, so we use it to create an application that operates some of the functions like in Music App/Players.



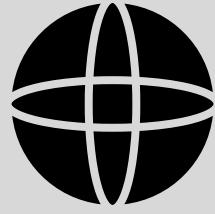


WHAT IS QUEUE?

A QUEUE IS DESCRIBED AS A LINEAR DATA STRUCTURE WITH OPEN ENDS AND FIFO (FIRST IN, FIRST OUT) EXECUTION OF OPERATIONS.

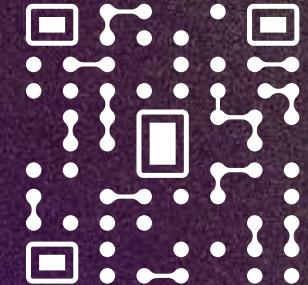
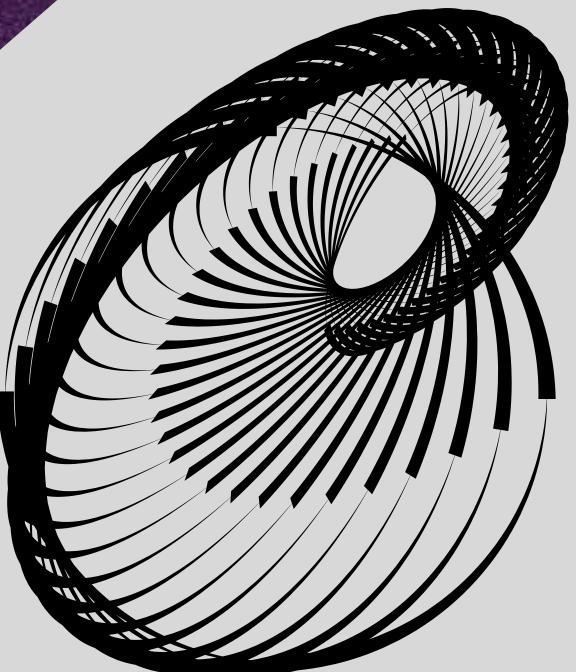
A QUEUE, ACCORDING TO OUR DEFINITION, IS A LIST IN WHICH ALL ADDITIONS ARE MADE AT ONE END AND ALL DELETIONS ARE MADE AT THE OTHER.

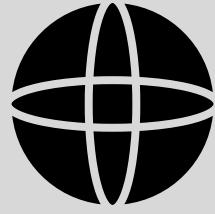




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enqueue



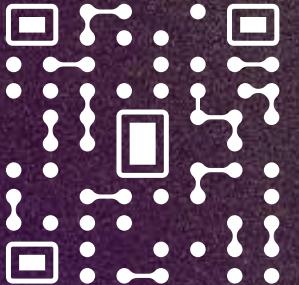


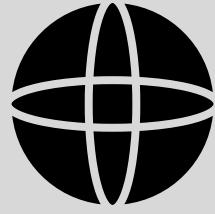
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DEQUEUE



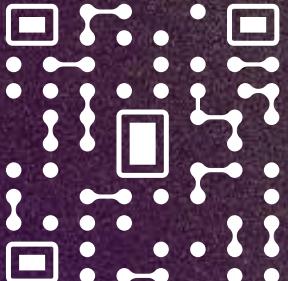
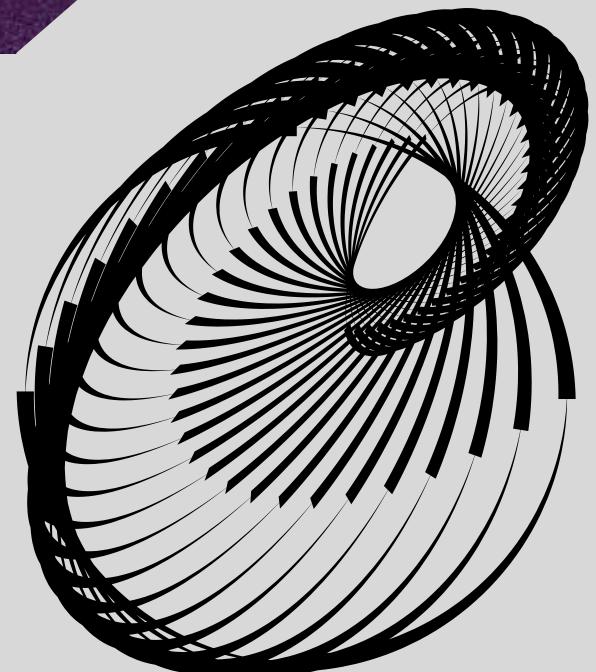


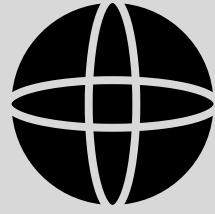
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PEEK



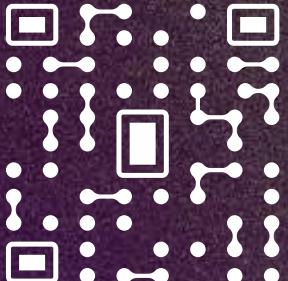


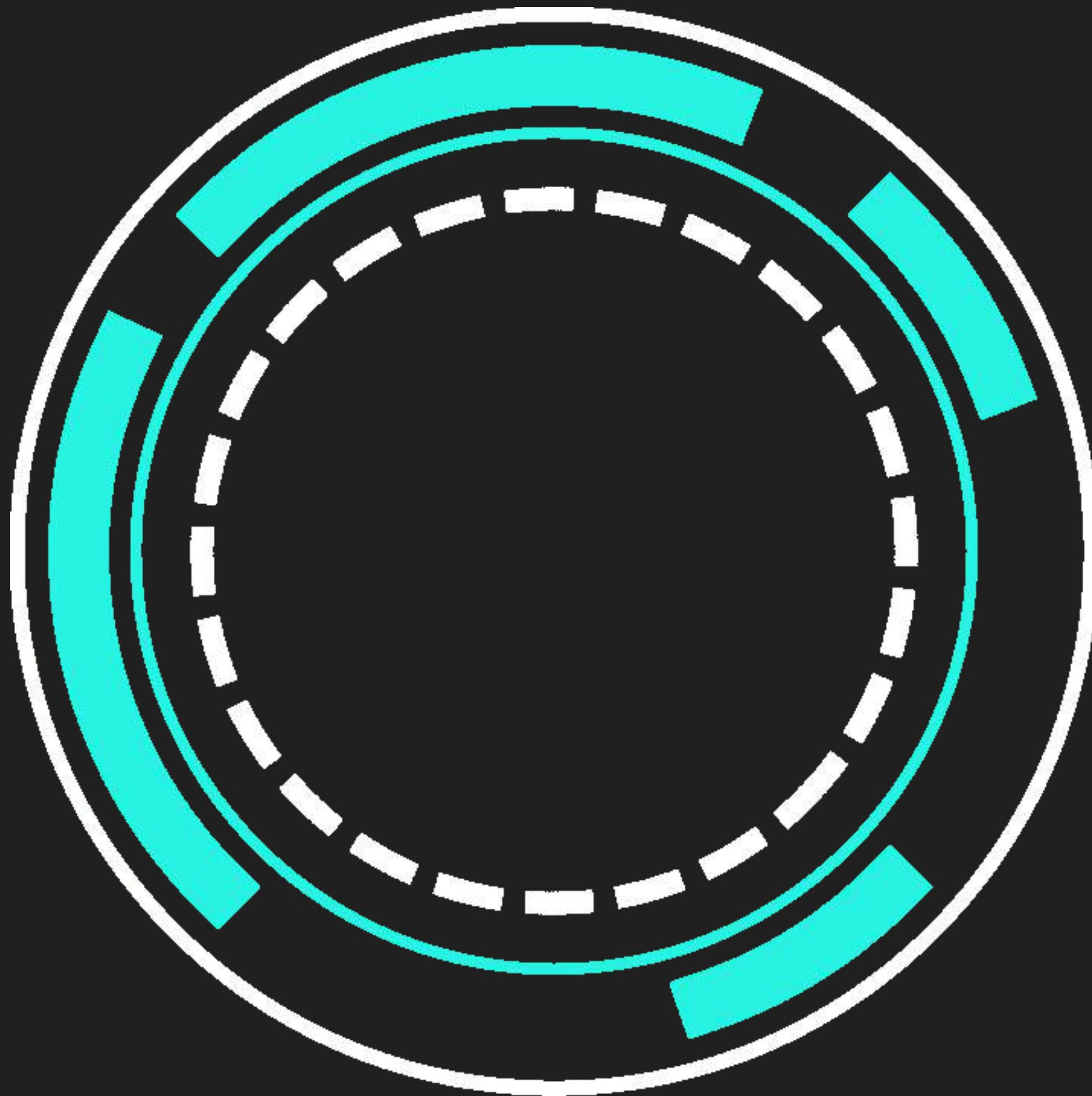
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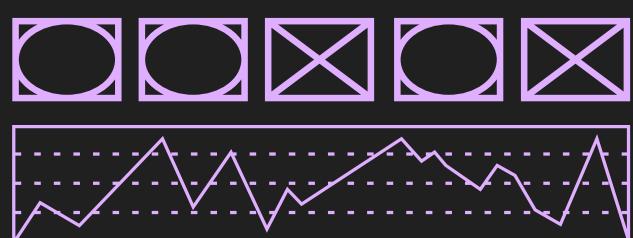
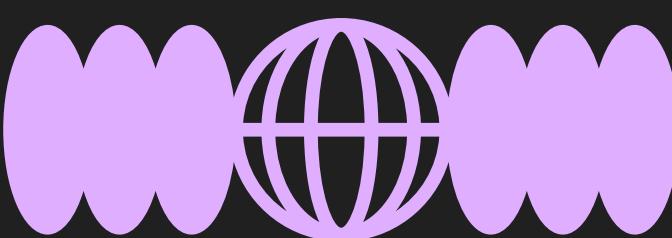
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DISPLAY



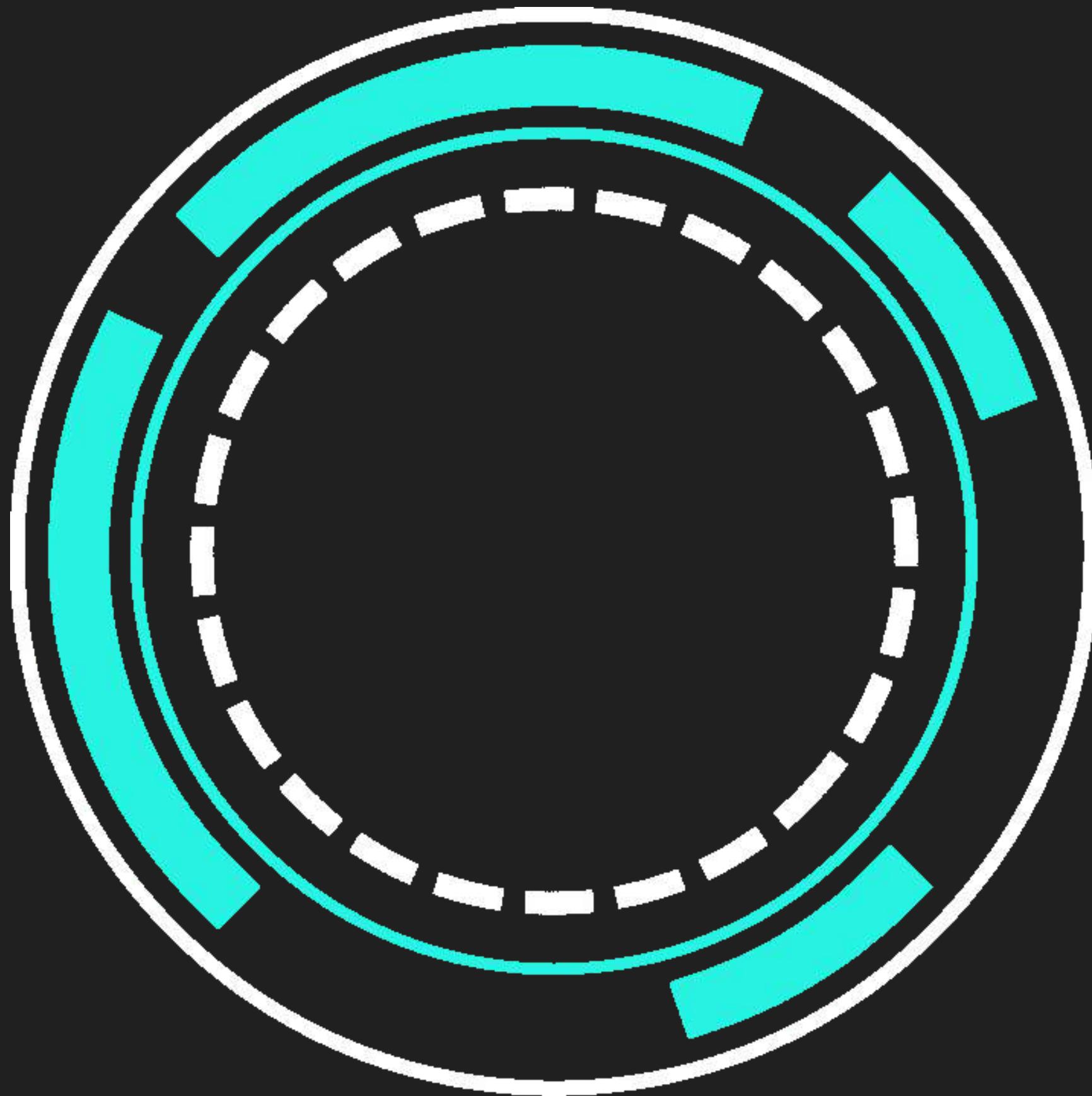


STEP 1:

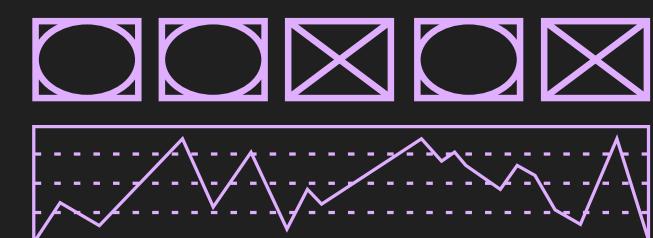
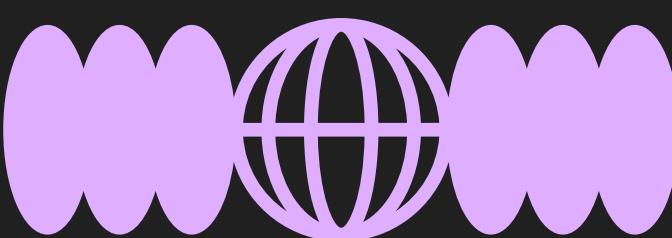


Go to the Music
App/ Player.



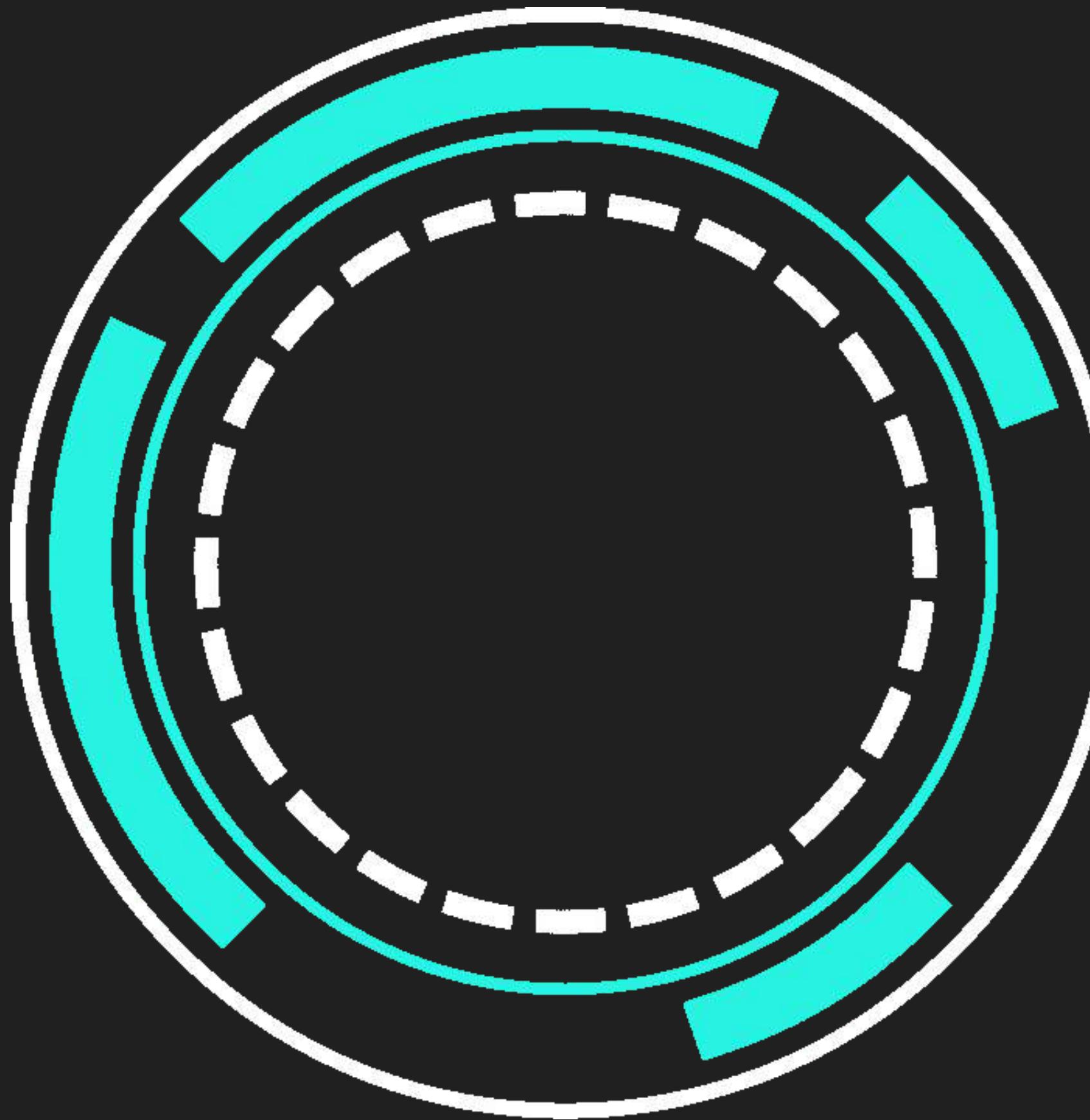


STEP 2:

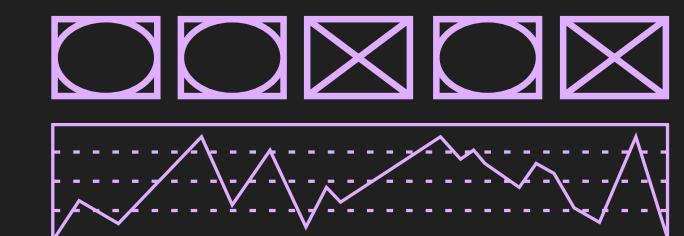
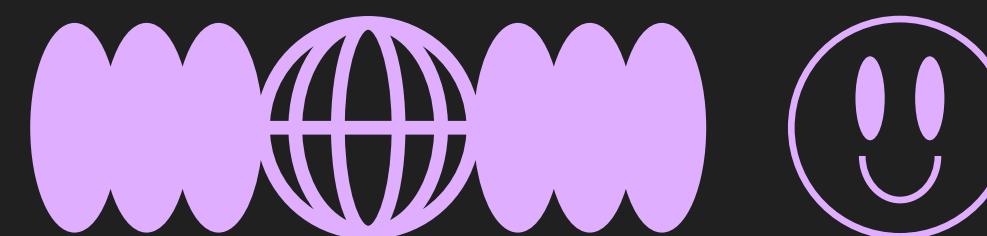


Choose “insert”
to input songs in
the queue.

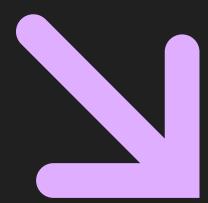


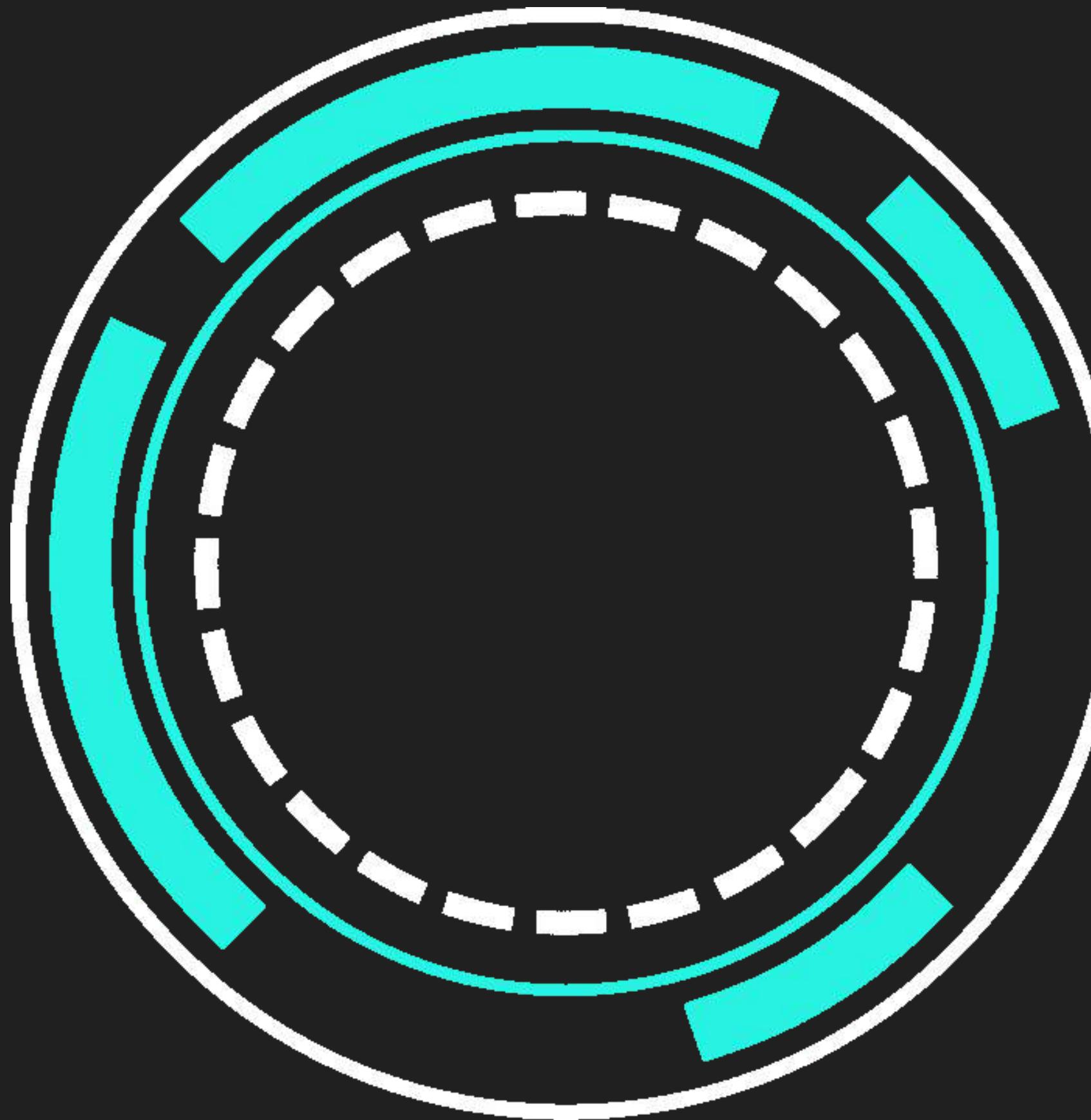


STEP 3:



The user can insert songs as many as they like until they choose to display the songs in the queue.



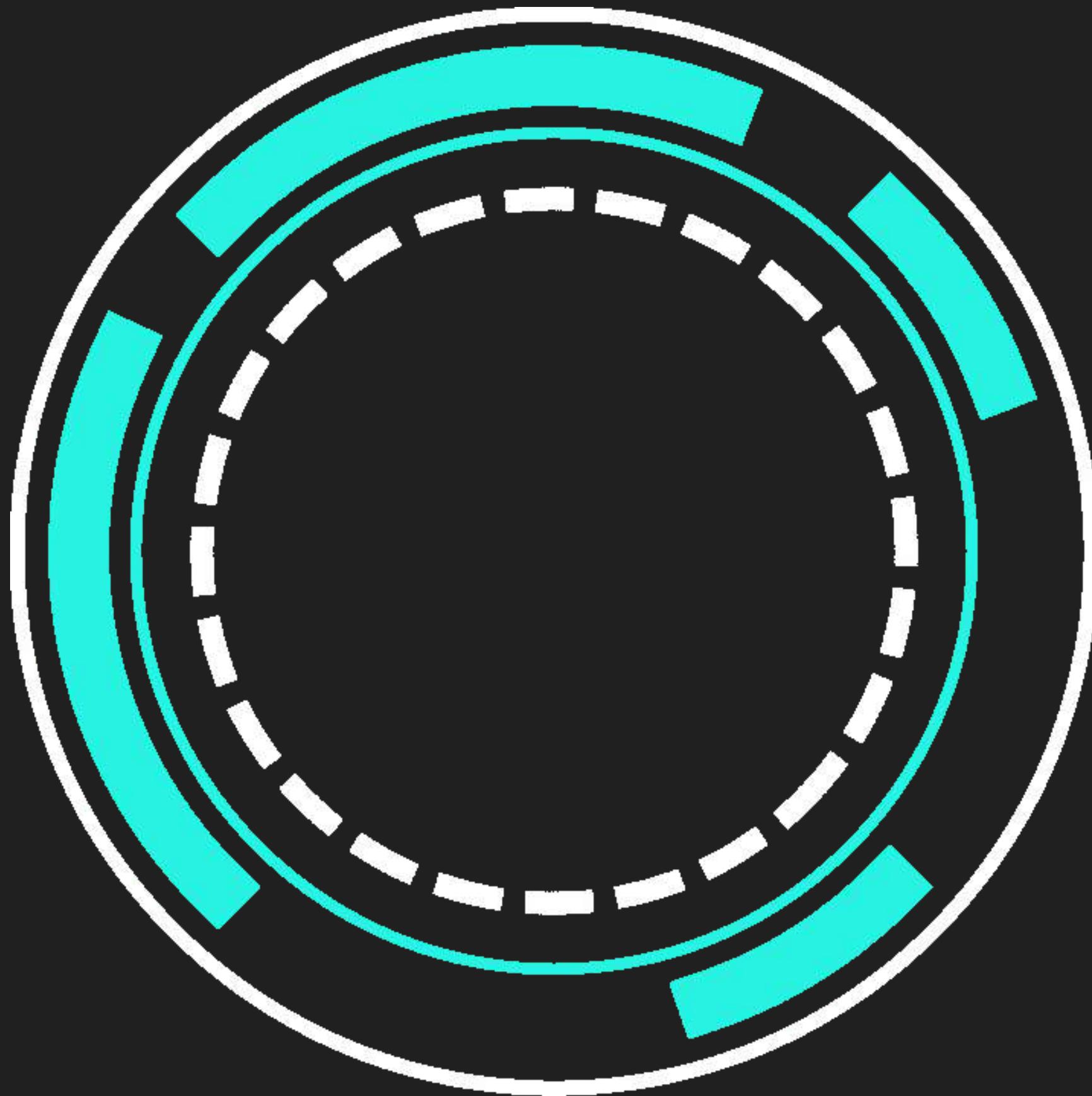


STEP 4:

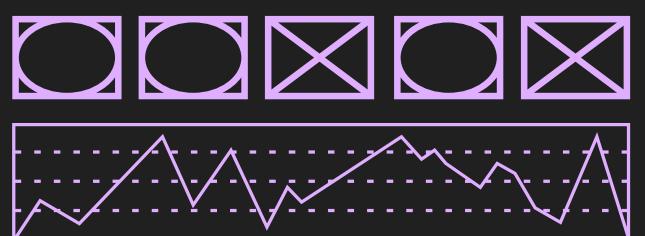
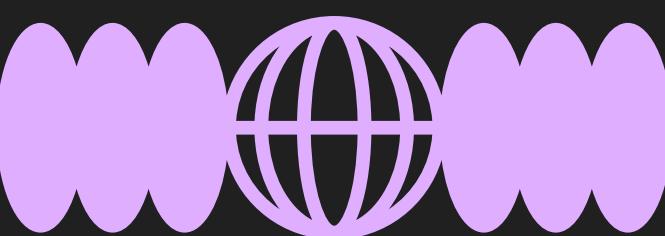


If the user wishes to see the songs they have inserted, they can choose “display” to see the current queue (Using the display method).



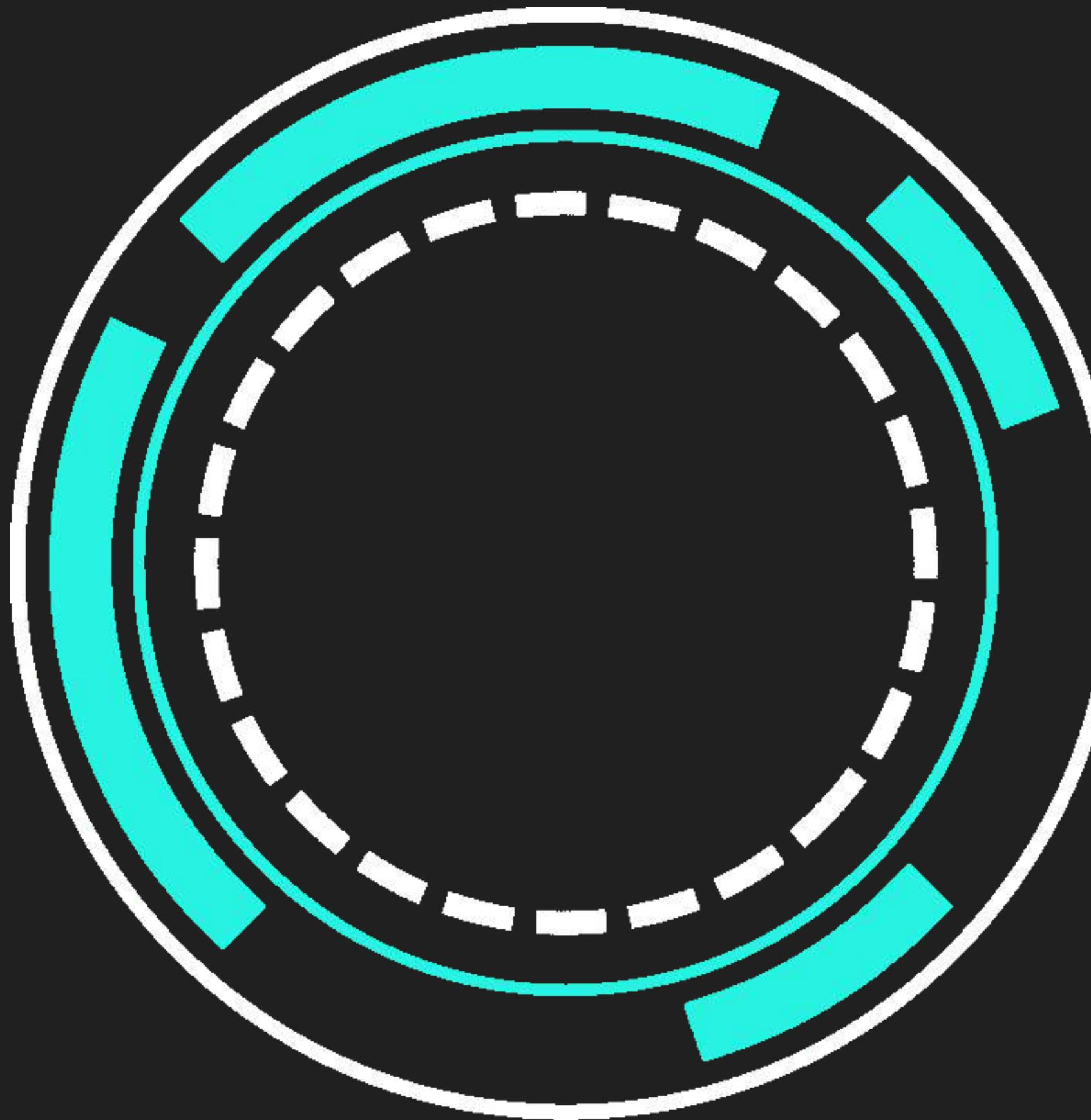


STEP 5:

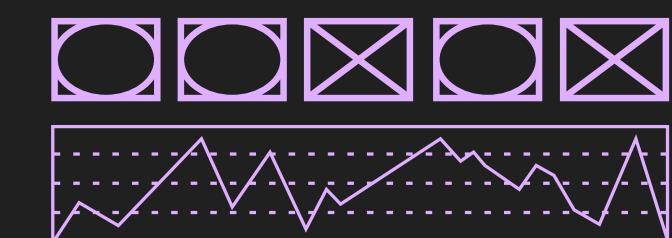
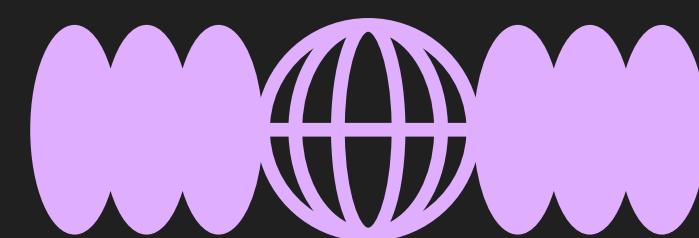


Choose “next” to play the
next song in the queue
(Using the dequeue
method).

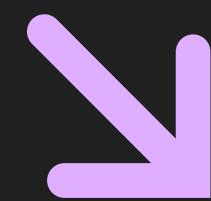


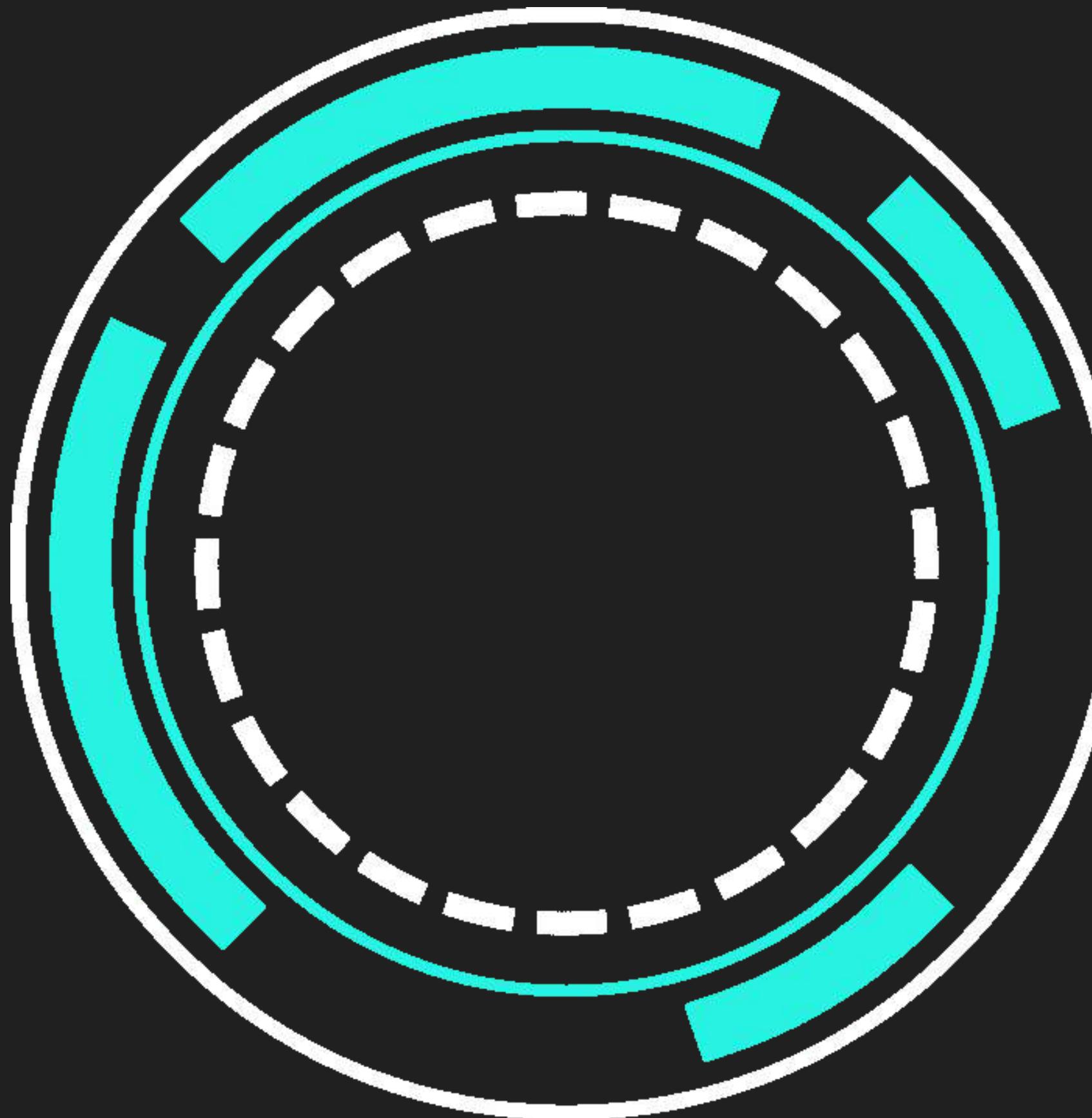


STEP 6:



The user can choose to see the current playing song (Using the peek method).





STEP 7:



If the user hasn't inserted a song, any of the three choices (display, next or peek) will print, "The Queue is Empty."



SAMPLE IDEA OF OUTPUT:

```
Enter your choice: Insert
Insert a Song: Last Hope
Enter your choice: Insert
Insert a Song: Maple Syrup
Enter your choice: Insert
Insert a Song: You Still Think About Her
Enter your choice: Insert
Insert a Song: I Hate Everything About You
```

SAMPLE OUTPUT

This is the output if the user chose “insert” to add a song in the queue

SAMPLE OUTPUT

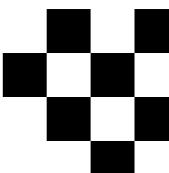
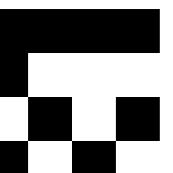
This is the output if the user chose “display” to see the songs in the queue.

```
Enter your choice: display
Current Queue:
Last Hope
Maple Syrup
You Still Think About Her
I Hate Everything About You
Enter your choice:
```

```
Enter your choice: peek
Last Hope
Enter your choice:
```

SAMPLE OUTPUT

This is the output if the user chose “peek” to see the current playing song.



SAMPLE IDEA OF OUTPUT:

```
Enter your choice: next
Enter your choice: display
Current Queue:
Maple Syrup
You Still Think About Her
I Hate Everything About You
Enter your choice: peek
Maple Syrup
Enter your choice: |
```

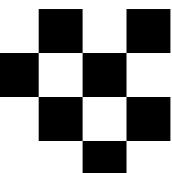
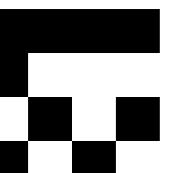
SAMPLE OUTPUT

When the user chooses “next”, the user must choose “display” again to see the current queue and can also choose “peek” to see the current song that is playing.

```
Enter your choice: display
The Queue is Empty.
Enter your choice: next
The Queue is Empty.
Enter your choice: peek
The Queue is Empty.
Enter your choice: |
```

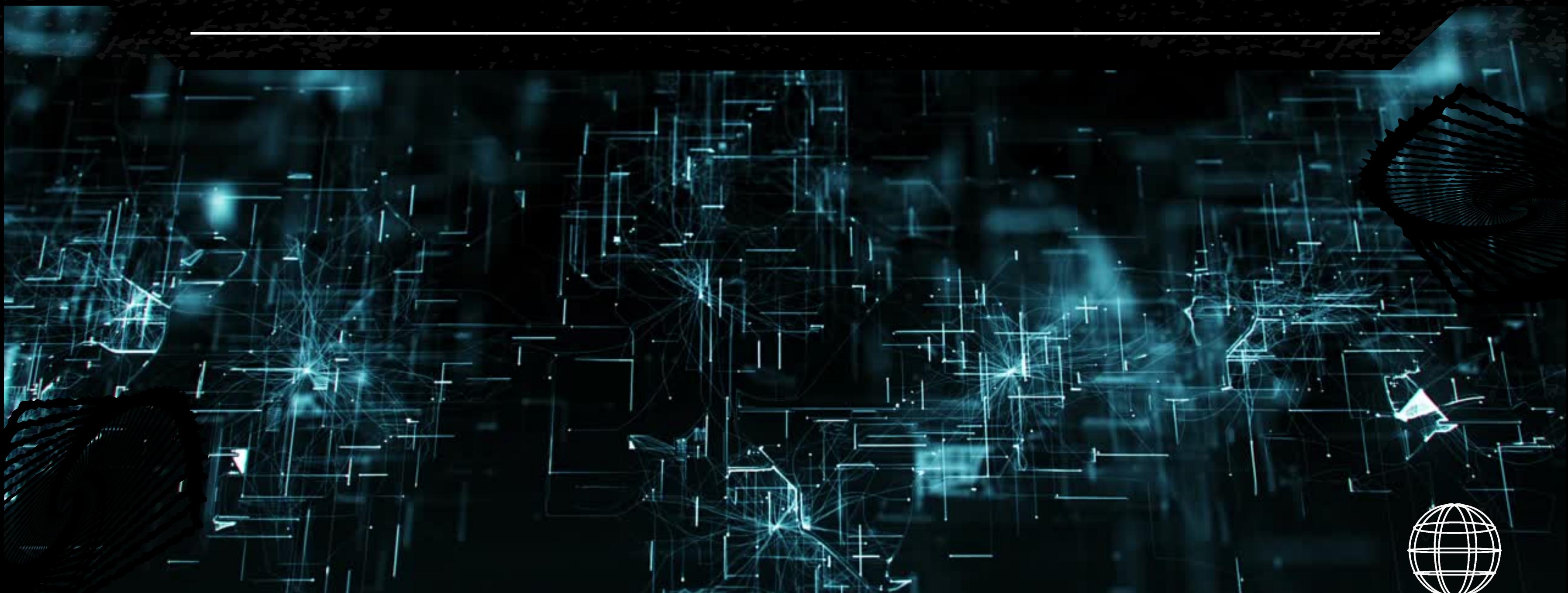
SAMPLE OUTPUT

This is the output when the user hasn’t inserted a song and chooses any of the three choices, (display, next or peek).

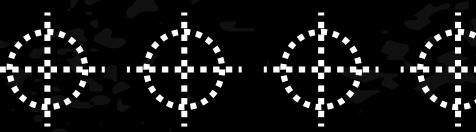




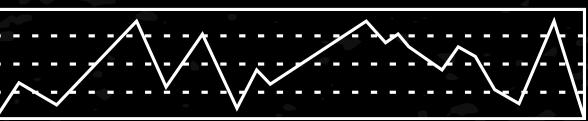
THANK YOU!



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