

# Project Part 2

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**Title:** Melody Milieu

**Summary:** This is the online Music recommendation system which recommends song based on the user ratings and based on his download and browsing history of songs. It also provides the platform for artists to upload their songs and earn profits from the number of users who listen/buy their songs. To date, there are over 97 million songs written with a new song being written every two minutes. As the usage of MP3 files has increased over the years, it has now become common to include the metadata (ID3 tags) of the mp3 data in these files.

## Project Requirements

User Requirements				
ID	Requirements	Topic Area	Actor	Priority
UR-01	As a new user, I want to sign up	Authentication	User/Artist	Critical
UR-02	As a user, I want to log in	Authentication	User/Artist	Critical
UR-03	As a user, I want to search songs	Music	User	Critical
UR-04	As a user, I want to search artists	Music	User	Critical
UR-05	As a user, I want to search songs by language	Music	User	High
UR-06	As a user, I want to view my recent songs	Music	User	High
UR-07	As a user, I want to create playlists	Music	User	Moderate
UR-08	As a user, I want to view recommendations	Music	User	High
UR-09	As a user, I want to buy songs	Music	User	Moderate
UR-10	As a user, I want to choose/change my subscription plan	Music	User	Moderate
UR-11	As a user, I want to choose my payment methods	Payment	User	High
UR-12	As a user, I want to download songs	Music	User	Moderate
UR-13	As a user, I want to share playlists	Music	User	Low

UR-16	As an artist, I want to upload songs	Music	Artist	Critical
UR-17	As an artist, I want to view the popularity of my songs	Music	Artist	Moderate
UR-18	As an artist, I want to download my songs	Music	Artist	High
UR-19	As an artist, I want to monitor my portfolio	Music	Artist	High
UR-20	As an artist, I want to setup my direct deposit	Payment	Artist	Critical
UR-21	As an artist, I want to Create an account	Authentication	Artist	Critical
UR-22	As an admin, I want to Create plan for users/artists	Management	Admin	Critical
UR-23	As an admin, I want to modify plan for users/artists.	Management	Admin	Critical
UR-24	As an admin, I want to view payment methods for users/artists.	Payment	Admin	High
UR-25	As an admin, I want to manage logs to check for suspicious activity	Management	Admin	Moderate
UR-26	As an admin, I want to perform health checks	Management	Admin	High
UR-27	As an admin, I want to change activation status users/artists.	Management	Admin	Critical

Business Requirements				
ID	Requirements	Topic Area	Actor	Priority
BR-01	Must update bills monthly based on users/artists	Payment	User,Artist	Critical
BR-02	Must notify users of expiring plans	Notification	User	High
BR-03	Must warn users for exceeding data usage	Notification	User	High

User Requirements				
UR-14	As a user, I want to add credit/debit cards	Payment	User	Critical

Non-functional Requirements			
ID	Requirements	Topic Area	Priority
NFR-01	Must be able to handle network outage	Maintenance	High
NFR-02	Must support streaming to at least 1000 users concurrently	Maintenance	High
NFR-03	Should send email without a latency more than 5 hours	Maintenance	Moderate
NFR-04	Interface should be user friendly	Design	High

User Requirements				
UR-15	As a user, I want to rate a song	Music	User	High

Functional Requirements				
ID	Requirements	Topic Area	Actor	Priority
FR-01	Tags for meta-data used by artist should be standard	Requirements	Admin	High
FR-02	Support audio controls on browsers	Design	Admin	Critical
FR-03	Notify when user/artist don't enroll in a plan	Notification	Admin	High
FR-04	Send recommendation mail to the users	Notification	Admin	High

**Database Storage :**

**Database :** PostgreSQL

The data is distributed in 5 tables :

**User** - Has the information for the Customers and Artists who have signed up.

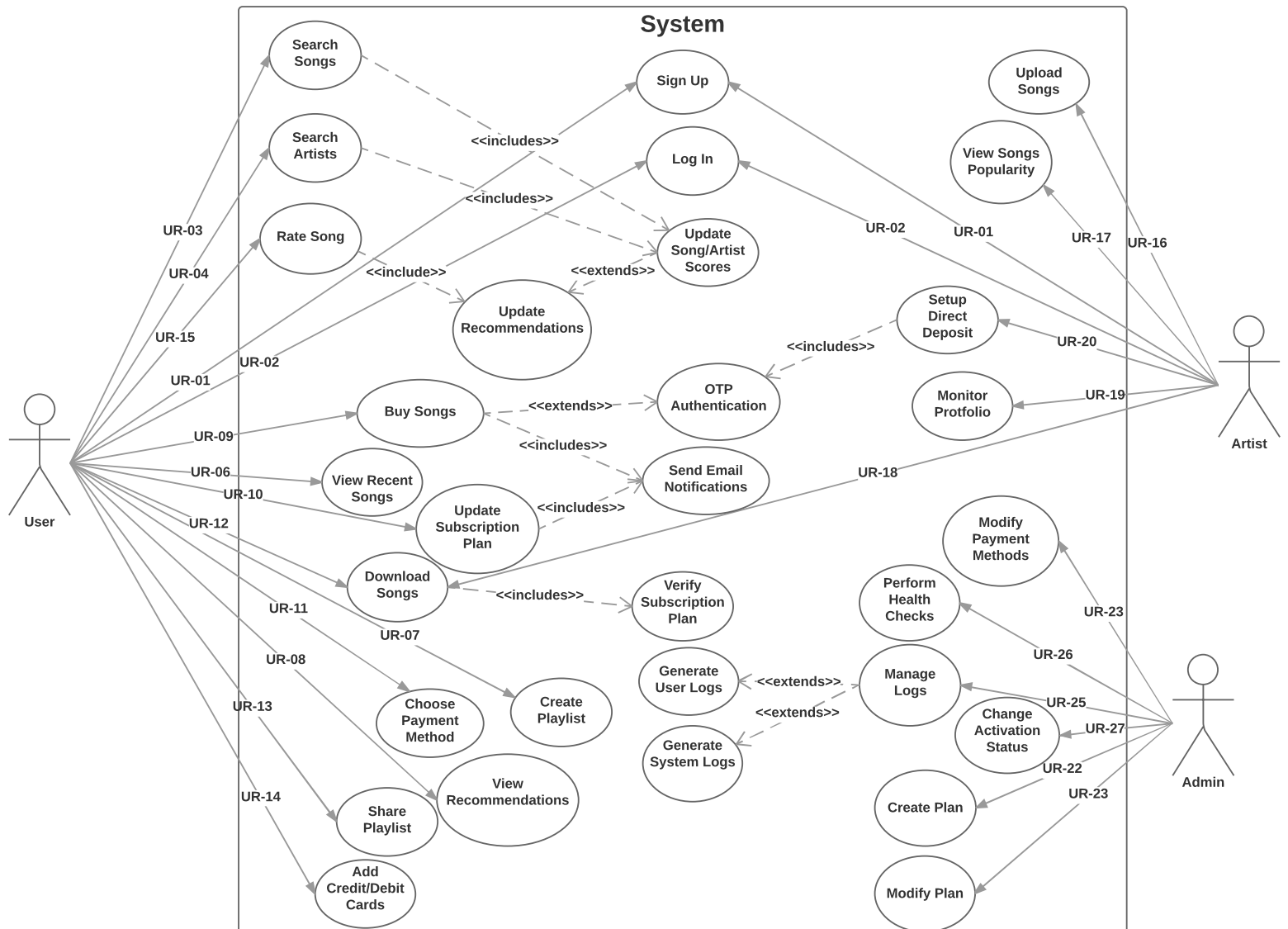
**Song** - Has the url and all the metadata information related to the song

**Payment** - The payment information associated

**Message** - The table to handle notifications and send OTP

**Plan** - The possible plans available for the customers.

## Use Case Scenario



## Use case Documents

i.

Use case ID:	UR-19
Use case Name:	Direct Deposit
Description	Artist sets up direct deposit

Actors	Artist
Pre-conditions	Artist account is created His identity has been verified
Post-conditions	The Direct deposit details get linked to the user's account
Frequency of use	Low

### Flow of events

	Actor Actions	System Response
1	Click on Direct Deposit	
2	Enter Direct Deposit details	
3	Click submit button	Receive and verify Direct Deposit details
4		Send OTP to Actor's phone
5	Enter OTP and click submit	Verify OTP
6		Store Direct Deposit details and respond to actor "Direct Deposit has been setup successfully"

Variations	2 factor authentication is not enabled for user
Exceptions	
Developer Notes	Setup 2 factor authentication

ii.

Use case ID:	UR-15
Use case Name:	Rate song
Description	User rates a song

Actors	User
Pre-conditions	User account is created User has setup payment methods
Post-conditions	Users rating is recorded and the recommend system is updated
Frequency of use	High

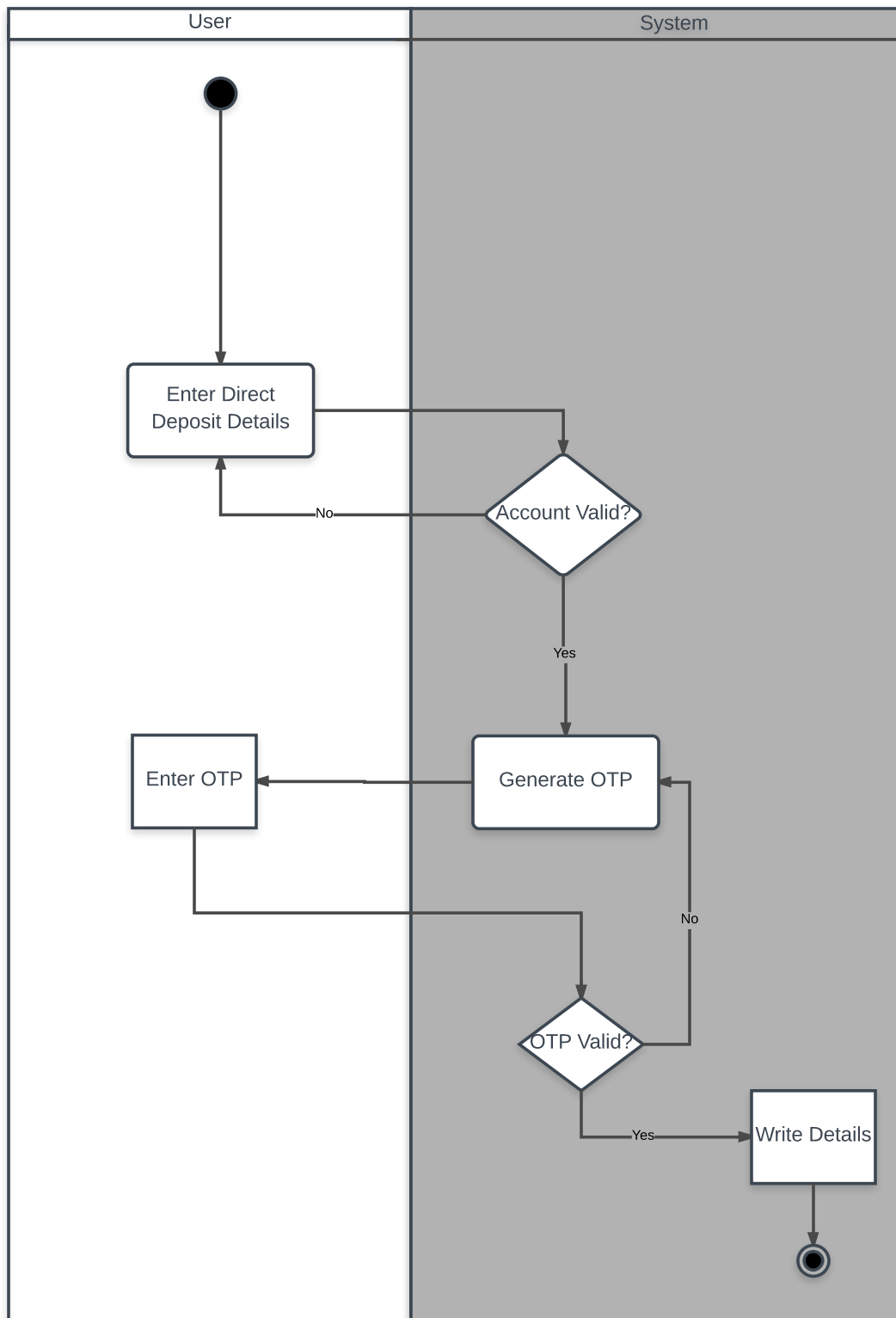
#### Flow of events

	User Actions	System Response
1	Click rate a song	
2	Give rating/feedback and click submit button	Write to logs
3		Calculates Scores and generate predictions
4		Update recommendations

Variations	User decides not to rate a song
Exceptions	Unable to write log
Developer Notes	

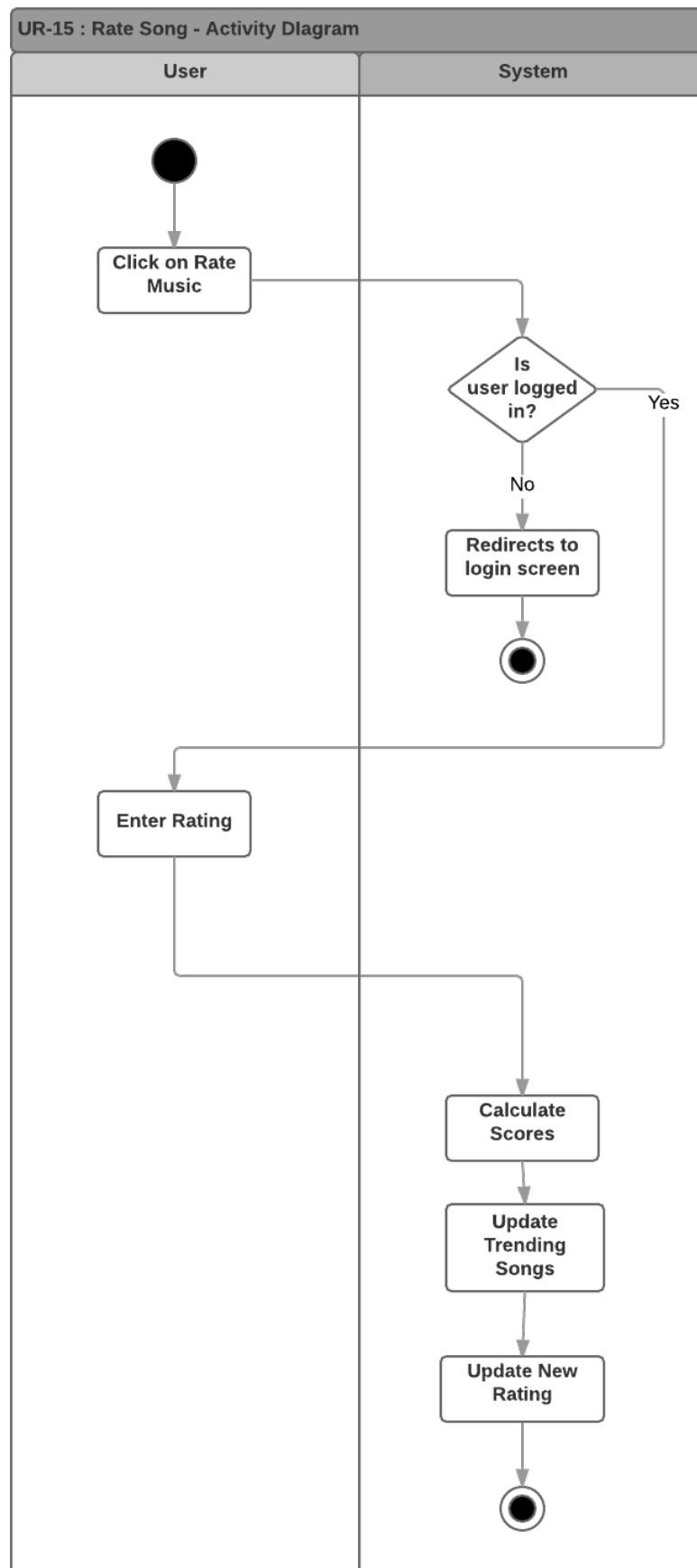
## Activity Diagram

- 1) Direct Deposit UR-19: Artist sets up direct deposit. The direct deposit is setup to pay a portion of the profits from his uploaded songs.



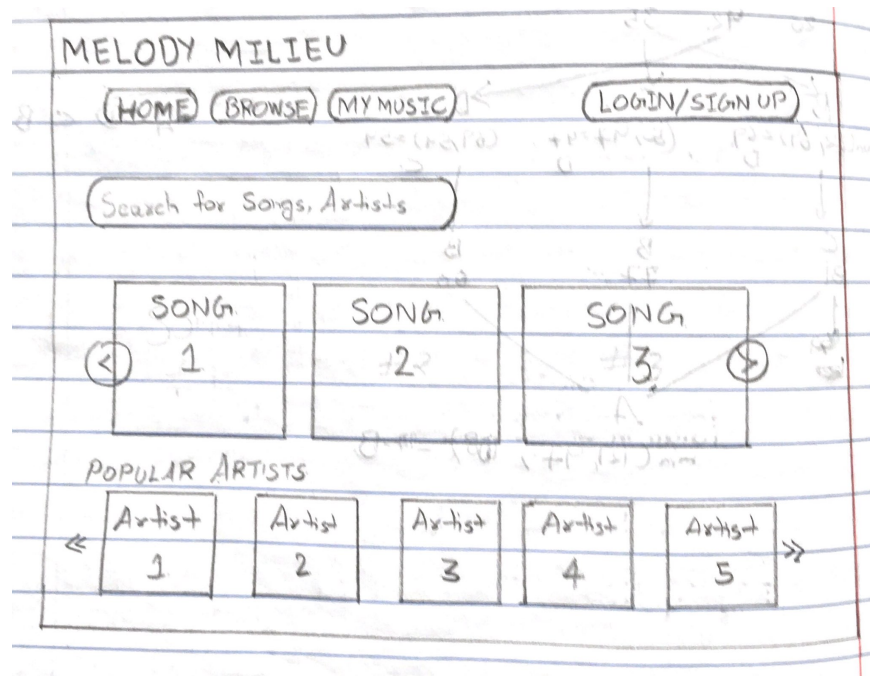


## 2) Rate Song UR-15:

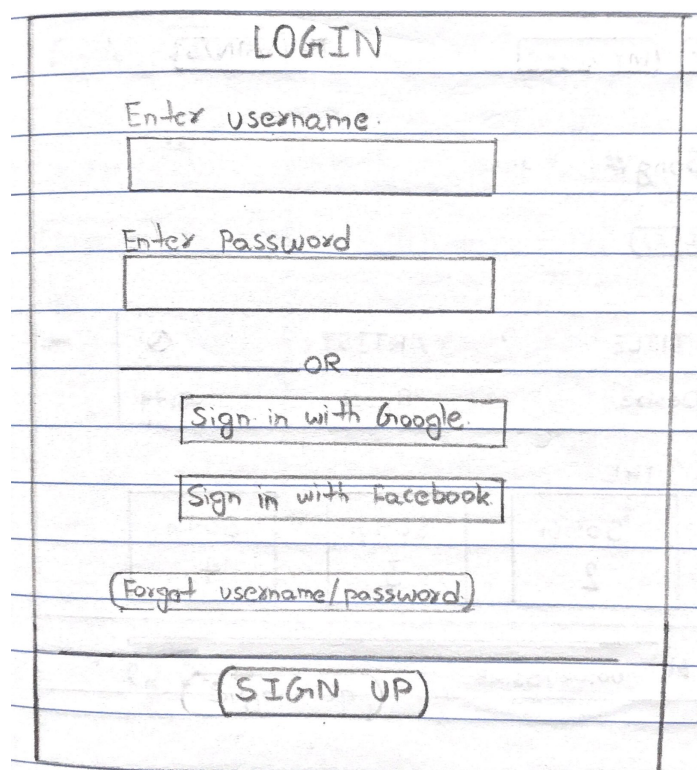


## UI Mockups

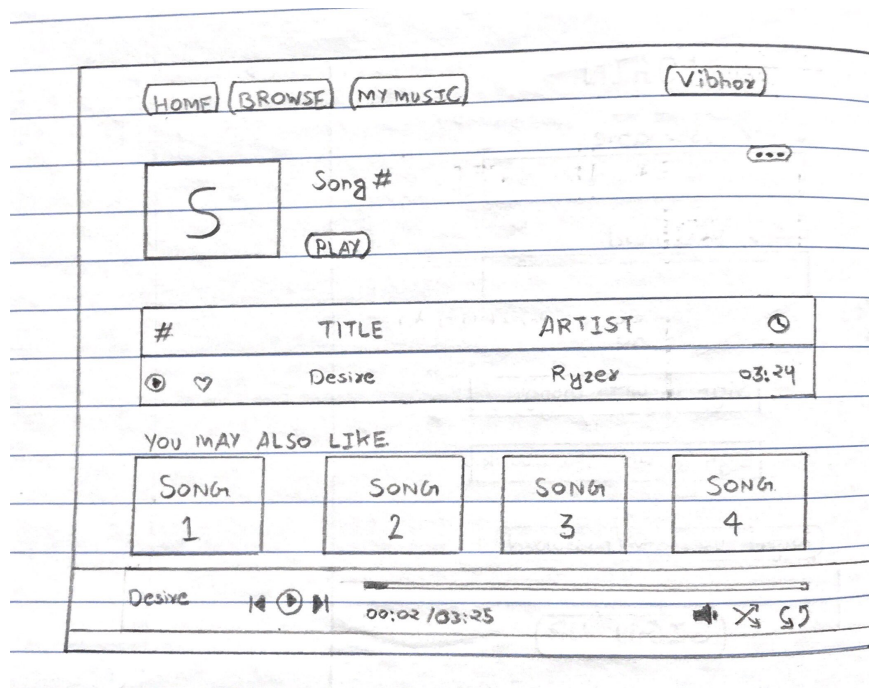
1) Home Screen of Melody Milieu: The content is divided in different sections like "Songs", "Popular Artists" etc and each is shown in the form of tiles.



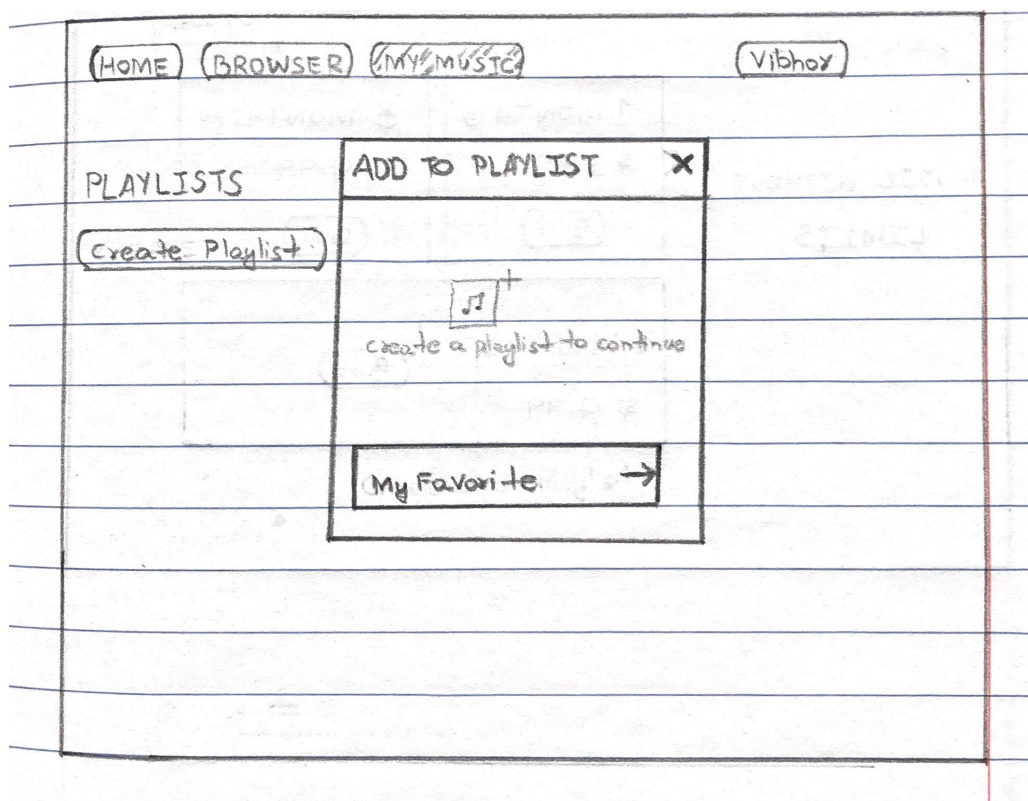
2) This is the Login Screen when user clicks on "Login/Sign Up" option on top right corner of the screen. This screen has SSO option from google and facebook for sign up or sign in.



3) This screen comes when user select any song from search or home screen. The song play bar is shown at the bottom of page. Also when user logs in, his name is shown at top right corner of the window.



4) This is the Playlist screen when user clicks on "My Music" and click on "Create Playlist" button.



5) This is "Subscription Plan" screen. The user browse to this screen by clicking on his name on top right corner of the screen and selecting "My Plans" from the drop down.

HOME BROWSE MY MUSIC Vibhor

My Plans Logout

	1 MONTH @	3 MONTHS @
MUSIC WITHOUT LIMITS	\$3.99	\$9.99
	BUY	BUY

6 MONTH @ \$17.99

BUY

6) This is "Payment" screen that comes up when user selects a "Subscription Plan" or buy any song. This screen ask for payment details from user.

Vibhor

PAYMENT

Country  
United States of America ✓

Master Card VISA Discover

Card Number

Expires CVC

First Name Last Name

Billing address

Street address

Apt.

City State

ZIP code

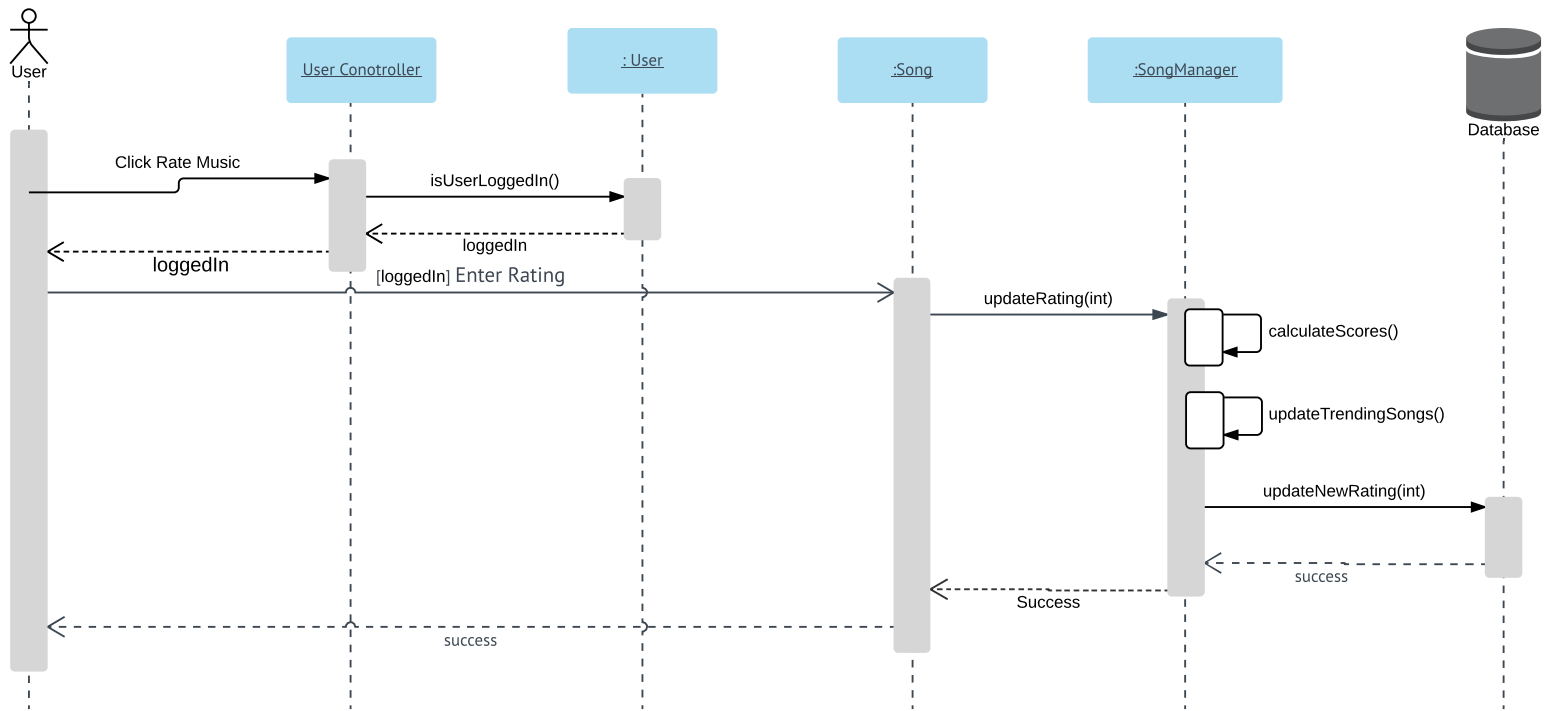
Contact Information

Phone number Email Id

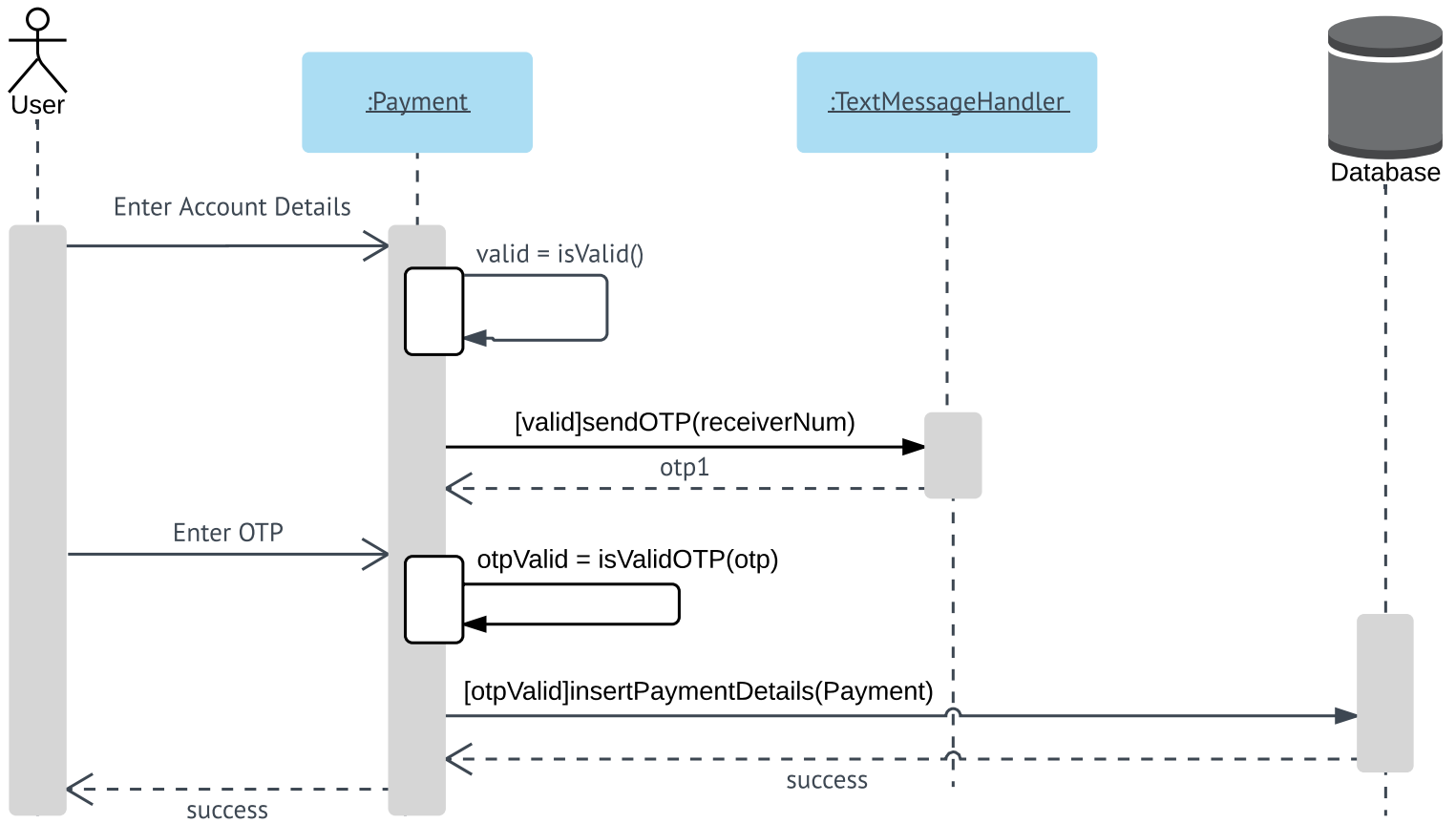
Cancel Submit

## Sequence Diagrams

### 1. Song rating: UR-15



2 ) Direct Deposit UR-19: Artist sets up direct deposit. The direct deposit is setup to pay a portion of the profits from his uploaded songs.



# Class Diagram

