

- GROUP 16 -



HAKORU

AI-POWERED DIGITAL MUSIC REPERTORY LIBRARY

HAKORU

AI-powered Digital Music Repertory Library

A A# B C ... G#

Am

At the starting of the week

G

At summit talks you'll hear them speak

G A

It's only Monday

E

G

A

Tomorrow never comes until it's too late

I I | U
A K O R



Problems on market

1

Personalization

2

**User Interface
and Experience**

3

**Content Not
Updated**

4

Incorrect Content

User Interface and Experience

The screenshot shows a web browser window displaying the website <http://www.akormerkezi.net>. The page content includes:

- Header:** Includes the logo "Akör merkezi", navigation links (Haberler, Akor | Tab | Söz | Nota, Demolar, Stüdyolar, Anketler, İlanlar, Forum), a search bar, and a login link.
- Breadcrumbs:** Akor | Tab | Söz | Nota Arşivi.
- Information Box:** Contains details about a song: Seslendiren ve Şarkı: Sibel Can - Benim Adım Aşk, Biçim: Akor, Gitar Akorları - HİÇBİRİ, Tarih: 3 Ekim 2009 Cumartesi, Gönderen: kripton, Toplam Okuyan: 10.544 kişi, Bu Ay Okuyan: 73 kişi, Bu Hafta Okuyan: 8 kişi.
- Text Area:** Beğendiniz mi? Benim Adım Aşk Akor sayfasını Şimdi paylaşın: [Share button].
- Rating:** Puanlama: ★★★★★ (6 kişi).
- Text Area:** Benim Adım Aşk şarkısının diğer versiyonlarına bakın >>
- Text Area:** Metin boyutu: (+ Büyült) (- Küçült)
- Text Area:** Fm# Em Fm#
GIT SENDE GIT UNUT BENİ
Fm# G Fm#
GIT SENDE GIT HERKES GİBİ
Em A Bm
BİR BÜYÜ BİR LANET BU BİTMEDİ ÖMÜR BOYU
A G Fm#
GALİBA SEVİLMESİ HAKETMEDİM
Fm# Em Fm#
BİR BEN MİYİM YENİLEN KADERE
Fm# Em Fm#
BİR BEN MİYİM BANA HÜKMEDİYOR
G A G
HİÇ HATRIM GEÇMEDİ Mİ Bİ KERE
Em Fm#
YİNE BİR BANA ZULMEDİYOR
Bm
BENİM ADIM AŞK BENİM ADIM AYRILIK
Em Fm# (Bm-Fm#)
- Anket:** Pinarezgili soruyor: Duman grubunun en sevdığınız şarkısı hangisi?
Options: Yürek, En Güzel Günüm Gecem, Bu Akşam, Yürekten, Aman Aman, Ah, Haberi Yok Ölüyorum, Halımız Duman.
- Buttons:** Ankete Katıl, Sonuçlar, Sonuçlar & Yorumlar, Yeni Anket, Anketler.
- Section:** Amatör Demolar
 - YARINLARA UMUT EKTİM (TÜRKÜ)
 - OZANLAR ŞAİRLER TÜRKÜLER YAZIN (TÜRKÜ)
 - NE GÜZEL YARATMIŞ YARATAN MEVLA (TÜRKÜ)
 - KAYBOLACAK (TÜRKÜ)
 - İSYANIM DEĞİLDİR HAL BELLİ (TÜRKÜ)
- Section:** En Yeni 5
 - Nicki Minaj Feeling Myself Çeviri
 - Haluk Levent Bazı Günler Şarkısı
 - Alias More Than Words Can Say Çeviri
 - Eden Xo Çeviri
 - Arctic Monkeys Fireside Çeviri

Personalization

Metin boyutu: (+ Büyült) (- Küçült)

Incorrect Content

B G#m
Ellerim kadehte gözüm kapıda.
C# B A#m
Geleceksin diye öpüm kopuyor.

Content Not Updated

En Yeni 5

- Nicki Minaj Feeling Myself Çeviri
- Haluk Levent Bazı Günler Şarkısı

Fact-Finding Techniques:



**PROBLEM
DEFINITION**

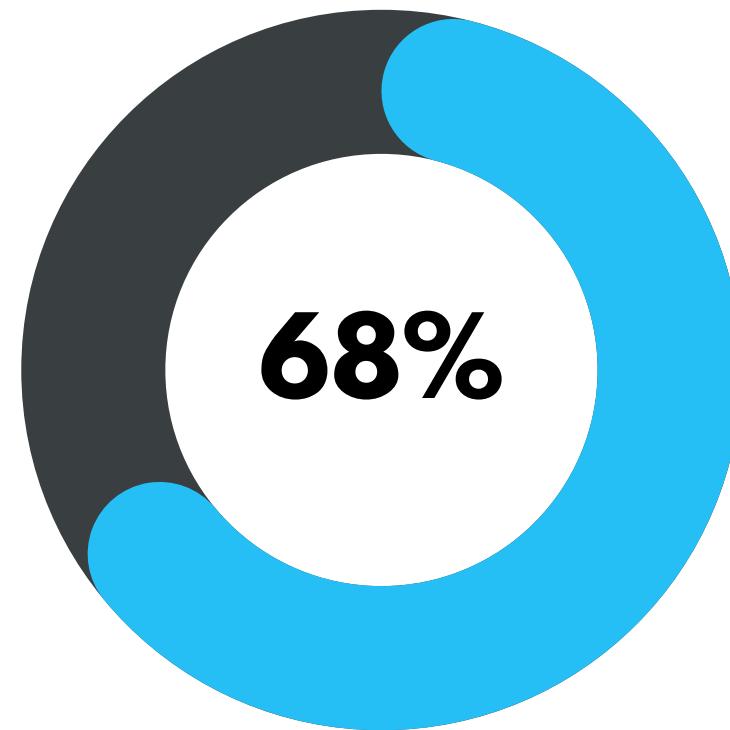
- Identified the core issues from a musician's perspective.
- We analyzed existing platforms and found structural weaknesses.



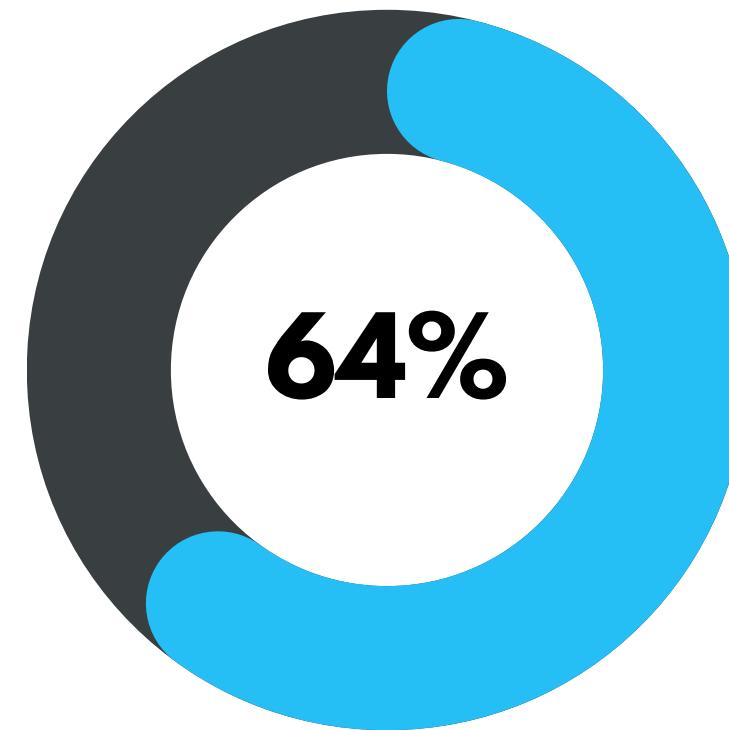
OBSERVATION

Surveys

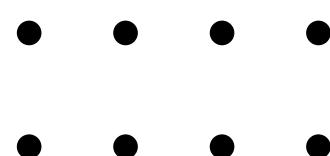
Need for chord services and satisfaction with the current market



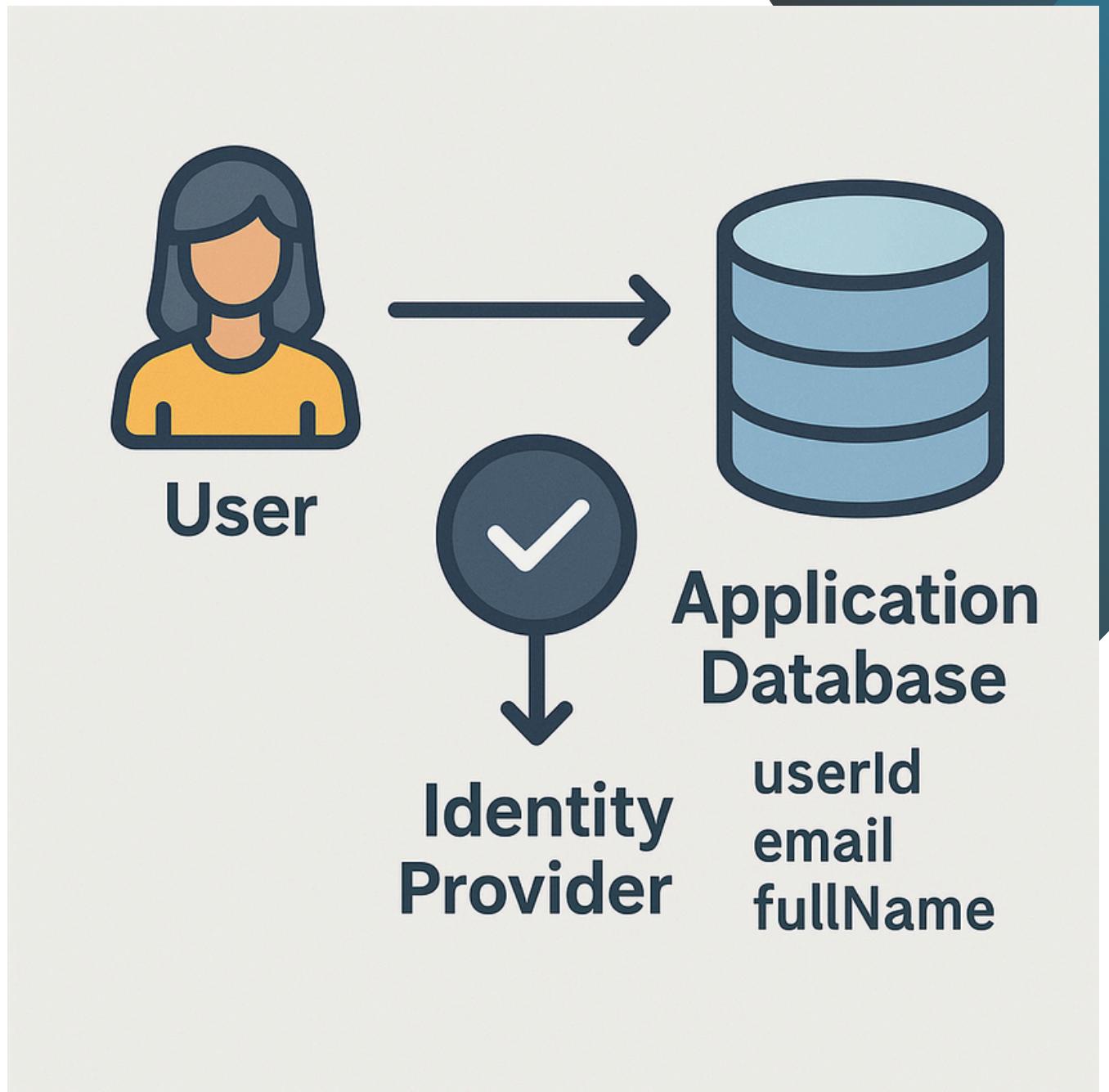
**Those Having
Problems**



**Wants a New
System**



WHY US?



JsonB

- Easier to work and more flexible
- Helps to add useful features

Am
Çok yorgunum
E Am
Beni bekleme kaptan

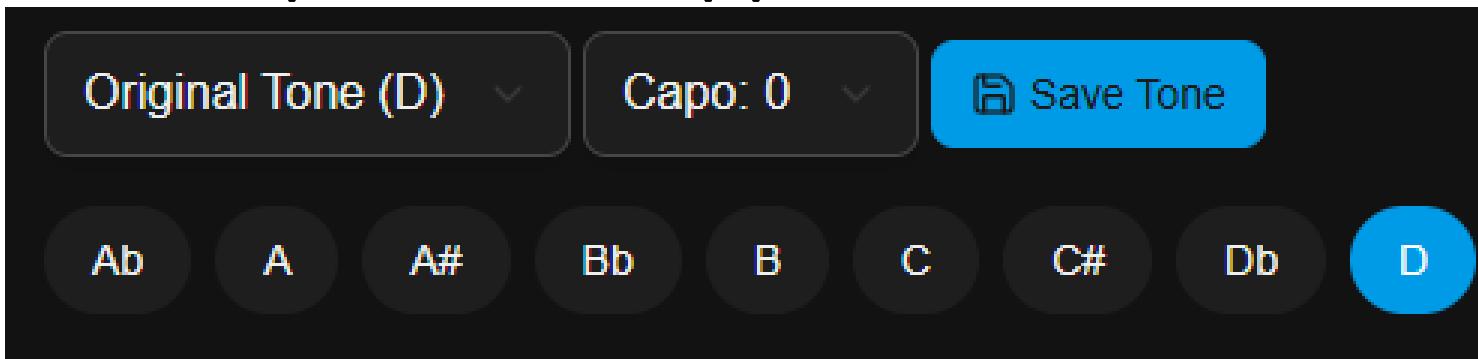
```
● ● ●  
{  
  "Key": "Am",  
  "Lines": [  
    { "Parts": [ { "Text": "Am", "Type": "chord" }, { "Text": " ", "Type": "space" } ] },  
    { "Parts": [ { "Text": "Çok yorgunum", "Type": "lyric" } ] },  
    { "Parts": [ { "Text": "E", "Type": "chord" }, { "Text": " ", "Type": "space" }, { "Text": "Am", "Type": "chord" } ] },  
    { "Parts": [ { "Text": "Beni bekleme kaptan", "Type": "lyric" } ] }  
    ...  
  ]  
}
```

Our Features

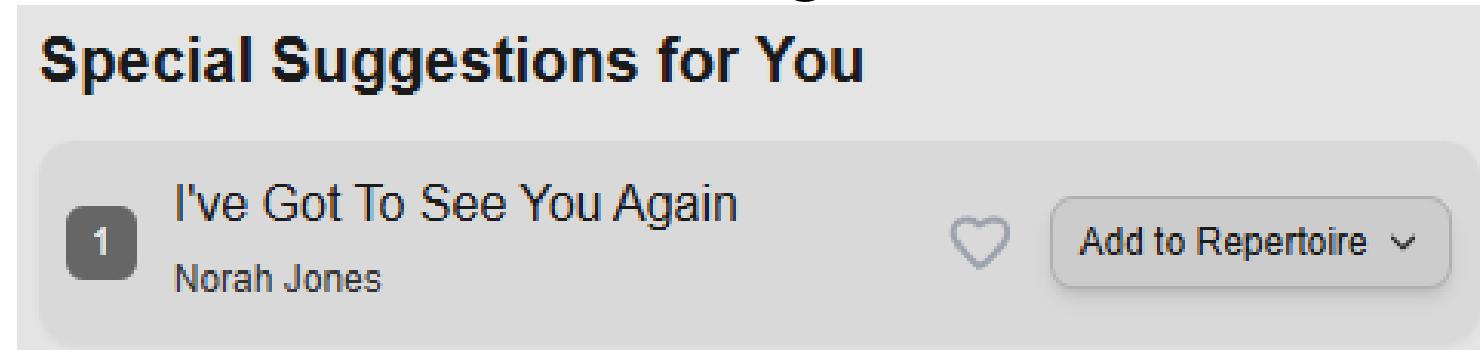
- Custom Repertoires



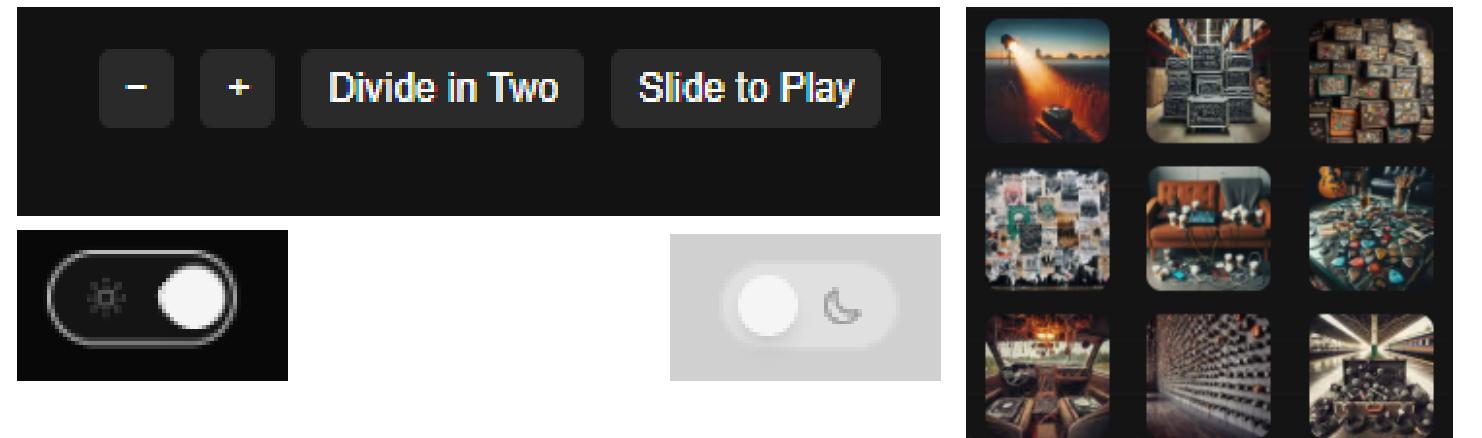
- Transposition Support



- Interaction Tracking (Coming soon)



- Personalization & UI Preferences



TECHNICAL PART

PART II

A A# B C ... G#

A

At the starting of the week

G

At summit talks you'll hear them speak

G A

It's only Monday

E

G

A

Tomorrow never comes until it's too late

I I | U
A K O R



UNF TABLE

	A	B	C	D	E	F	G	H	I	J	K	L
1	Id	ArtistId	ArtistName	ArtistDescription	ArtistIcon	ArtistSeoUrl	RepertoryId	RepertoryName	RepertoryDescrij	RepertoryIcon	UserId	UserName
2	1a6d04526-d9ea-	meyra	Meyra	Meyra şarkılarını	meyra	meyra	96830f6-f615-47	Repertuar denen	İlk repertuarım	repertory-3-icon	e814fe6d-749e-4	MüzikSever01
3	4471b22-d225-4	kibariye	Kibariye	Kibariye şarkıları	kibariye	kibariye	96830f6-f615-47	Repertuar denen	İlk repertuarım	repertory-3-icon	e814fe6d-749e-4	MüzikSever01
4	d784f8e2-1fa0-4	sezen	Sezen Aksu	Sezen Aksu şark	sezen	sezen	e1234567-e89b-	Akustik Set	Sakin akustik	repertory-acousti	32132132-4321-	MuzikSever02
5	c123e456-7890-	tarkan	Tarkan	Tarkan şarkıların	tarkan	tarkan	z9876543-210f-4	Latin Beats	Hareketli Latin e	repertory-latin-ic	54325432-1098-	BeatLover98
6	a5555aaa-bbbb-	ajda	Ajda Pekkan	Ajda Pekkan şartı	ajda	ajda-pekkann	repppp-1111-222	Disco Night	Disco ve dance	rep-disco-icon	78907890-8765-	DanceFan

M	N	O	P	Q	R	S	T	U	V	W
SongId	SongName	SongSeoUrl	SongViews	MainTone	SongAddedDate	LikedDate	RepertoryAdded	Lyrics	Chords	PopularTracks
ef7168e6-fbdd-4	Çözümüm Yok	cozumum-yok-isi	115	Am	2025-04-28	2025-04-28	2025-04-28	Ömrüm boyunca	Am, G, Em, F	Meyra
e9084e0-3a1a-4	Mor	mor-hande-yene	231	Dm	2025-04-28	2025-04-20	2025-04-28	Mor düşler görüdü	Dm, A#, F, C	Kibariye
f1122334-5566-7	Gurur	gurur-sezen	200	Am	2025-05-01	2025-05-02	2025-05-02	Sevgilim için yaz	Am, F, C, Dm	Ruhumda, Gülün
s98989898-7777	Senden İbareت	senden-ibaret	500	D#m	2025-04-15	2025-05-05	2025-05-05	Sen benim her şı	D#m, B, G#m, C	Şımanık, Kuzu Kü
d5566778-8899-	Yakar Geçerim	yakar-gecerim	350	F	2025-03-20	2025-04-10	2025-04-10	Yakar geçerim iç	F, Am, G, C	Resim

UNF TABLE

X	Y	Z	AA	AB	AC	AD	AE	AF	AG
FamousSongs	OtherSongs	Saved	InteractionType	PlaylistName	ArtistGenre	SongGenre	Album	ReleaseYear	Duration
Sevdim Seni, Hayal, İsyancı	Çözümüm Yok, Sıfır	Evet	Beğeni, Dinleme	Repertuar denen	Pop	Slow	Sevdim Seni	2020	03:45
İşte Gidiyorum, Oy Oy, İlla	Acele, Mor, Romantik	Evet	Beğeni, Dinleme	Pop Hit	Pop	Dans	Mor	2022	04:12
Gülümse	Gurur	Evet	Beğeni	Akustik Set	Pop	Akustik	Delikanlım	2015	04:10
Şımarık	Kuzu Kuzu	Hayır	Dinleme	Latin Beats	Pop	Latin Pop	Metamorfoz	2001	03:56
Resim, Yaz Yaz Yaz	Yakar Geçerim	Evet	Paylaşma	Disco Night	Pop	Disco	Farkın Bu	1990	04:00

AH	AI	AJ	AK	AL	AM	AN
CommentCount	LikeCount	ShareCount	PublicRepertory	SongCount	CreatedDate	UpdatedDate
3	255	0	0	2025-04-28	2025-04-28	
0	1267	1	0	2025-04-28	2025-04-28	
10	800	5	1	5	2025-05-02	2025-05-02
25	1200	30	0	8	2025-05-05	2025-05-05
40	900	60	1	12	2025-04-10	2025-04-10

1NF TABLE

ARTIST TABLE

	A	B	C	D	E	F
1	ArtistID	Name	Description	Icon	CreatedDate	UpdatedDate
2	a6d04526-d9ea-43db-bbab-631951b8a8bf	Meyra	Meyra şarkılarının sözleri ve gitar akorları	meyra	2025-04-28	2025-04-28
3	4471b22-d225-482e-9891-8b69a909e7e4	Kibariye	Kibariye şarkılarının sözleri ve gitar akorları	kibariye	2025-04-28	2025-04-28
4	7d0e0f30-ae24-4ba1-a2f6-d10dd8722db7	Tuna Tabu	Tuna Tabu şarkılarının sözleri ve gitar akorları	tuna-tabu	2025-04-28	2025-04-28

REPERTORY AND SONG TABLE

	A	B	C	D	E	F	G	H	I
1	RepertoryID	Userid	Repertory Name	Icon	SongID	Song Name	Artist Name	Creation Time	PublicRepertory
2	96830f6-f615-47bb-9aa8-b05649b24dc8	e814fe6d-749e-4135	Repertuar deneme	repertory-3-icon	ef7168e6-fbdd-4fe3-b88c-5831de6647af	Çözümüm Yok	Meyra	2025-04-28	[v]
3	96830f6-f615-47bb-9aa8-b05649b24dc8	e814fe6d-749e-4135	Repertuar deneme	repertory-3-icon	e9084e0-3a1a-479e-97ce-85d77ef1a2c3	Mor	Hande Yener	2025-04-28	[v]
4	0ba71be4-f263-45c7-8cb1-bf28572d6ae2	2f6af570-86fb-4f43-9	Benim Repertuarım	repertory-23-icon	474203f9-de9c-4469-b4fa-26908292930b	Unutamadım	Tuna Tabu	2025-04-28	[]

2 N F T A B L E S

A R T I S T T A B L E

	A	B	C	D	E	F
1	ArtistID	ArtistName	Description	Icon	CreatedDate	UpdatedDate
2	a6d04526-d9ea-43db-bbab-631951b8a8bf	Meyra	Meyra şarkılarını	meyra	2025-04-28	2025-04-28
3	4471b22-d225-482e-9891-8b69a909e7e4	Kibariye	Kibariye şarkıları	kibariye	2025-04-28	2025-04-28
4	7d0e0f30-ae24-4ba1-a2f6-d10dd8722db7	Tuna Tabu	Tuna Tabu şarkıları	tuna-tabu	2025-04-28	2025-04-28

R E P E R T O R Y T A B L E

	A	B	C	D	E	F	G	H
1	RepertoryID	UserID	Repertory Name	Icon	Song Quantity	PublicRepertory	CreatedDate	UpdatedDate
2	96830f6-f615-47bb-9aa8-b05649b24dc8	e814fe6d-749e-4135-a19e-66529026f124	Repertuar deneme	repertory-3-icon	2	[V]	2025-03-21	2025-03-21
3	bd8ea6bd-b81f-4d35-8a50-b3b8d3bf03e1	e814fe6d-749e-4135-a19e-66529026f124	Grup3	repertory-7-icon	4	[V]	2025-03-23	2025-03-24
4	0ba71be4-f263-45c7-8cb1-bf28572d6ae2	2f6af570-86fb-4f43-975c-61f77bc760b6	Benim Repertuarım	repertory-23-icon	9	[]	2025-04-26	2025-04-26

S O N G S T A B L E

	A	B	C	D	E	F	G	H
1	SongID	ArtistID	Song Name	SeoFriendlyUrl	Views	MainTonId	CreatedDate	UpdatedDate
2	ef7168e6-fbdd-4fe3-b88c-5831de6647af	a6d04526-d9ea-43db-bbab-631951b8a8bf	Çözümum Yok	cozumum-yok-isil	115	2025-04-28	2025-04-28	28.05.2025
3	e9084e0-3a1a-479e-97ce-85d77ef1a2c3	4471b22-d225-482e-9891-8b69a909e7e4	Mor	mor-hande-yener	2313	2025-04-28	2025-04-28	28.05.2025
4	474203f9-de9c-4469-b4fa-26908292930b	7d0e0f30-ae24-4ba1-a2f6-d10dd8722db7	Unutmadım	unutmadim-tuna-tabu	196	2025-04-28	2025-04-28	28.05.2025

2 N F T A B L E S

SONGS

	A	B	C	D	E	F	G	H
1	SongID	ArtistID	Song Name	SeoFriendlyUrl	Views	MainTonId	CreatedDate	UpdatedDate
2	ef7168e6-fbdd-4fe3-b88c-5831de6647af	a6d04526-d9ea-43db-bbab-631951b8a8bf	Çözümüm Yok	cozumum-yok-isil	115	2025-04-28	2025-04-28	28.05.2025
3	e9084e0-3a1a-479e-97ce-85d77ef1a2c3	4471b22-d225-482e-9891-8b69a909e7e4	Mor	mor-hande-yener	2313	2025-04-28	2025-04-28	28.05.2025
4	474203f9-de9c-4469-b4fa-26908292930b	7d0e0f30-ae24-4ba1-a2f6-d10dd8722db7	Unutamadım	unutamadim-tuna-tabu	196	2025-04-28	2025-04-28	28.05.2025

L I K E D S O N G S

	A	B	C
1	UserId	SongID	Like Date
2	e814fe6d-749e-4135-a19e-66529026f124	ef7168e6-fbdd-4fe3-b88c-5831de6647af	2025-04-28
3	2f6af570-86fb-4f43-975c-61f77bc760b6	474203f9-de9c-4469-b4fa-26908292930b	2025-04-28
4	b64dcf7e-d48e-449b-84f5-ad3e882c4075	e9084e0-3a1a-479e-97ce-85d77ef1a2c3	2025-04-28

3 N F T A B L E S

SONGS

A	B	C	D	E	F	G	H	I	J	K
SongID	ArtistID	SongName	S_Description	S_IconId	MainTonId	SongView	SongContent	S_SeoUrl	UpdatedDate	CreatedDate
550e8400-e29b-41d4-a716-446655440000	123e4567-e89b-12d3-a456-426614174000	Code Symphony	An epic instrume	icon_sym.png	TONE_MAJOR	350	{"lyrics": "Instrumental only; enjoy the coding vibes."}	code-symphony	2023-05-11T10:00:00Z	2023-01-15T09:00:00Z
660e8400-e29b-41d4-a716-446655440111	223e4567-e89b-12d3-a456-426614174111	Night Drive	Perfect track for	icon_night.png	TONE_MINOR	420	{"lyrics": "Driving through neon-lit streets...")}	night-drive	2023-06-01T18:20:00Z	2023-02-20T14:30:00Z

ARTISTS

A	B	C	D	E	F	G	H	I	J	
1	ArtistID	Name	A_Description	A_IconId	A_SeoUrl	A_SeoDescription	A_SeoMetaTitle	CreatedDate	UpdatedDate	ArtistViews
2	123e4567-e89b-12d3-a456-426614174000	The Rolling Codes	A legendary coding rock band.	icon_rolling.png	the-rolling-codes	Rolling Codes is a band comprised of programmers who rock.	The Rolling Codes - Official Artist Page	2023-01-10T08:1	2023-06-05T14:30:00Z	1500
3	223e4567-e89b-12d3-a456-426614174111	SynthWave	An electronic music project.	icon_synthwave.	synthwave	SynthWave blends retro synths with modern beats.	SynthWave - Official Artist	2022-11-20T12:0	2023-05-12T09:45:00Z	980

REPERTORY

A	B	C	D	E	F	G	H	I	
1	RepertoryID	UserId	IsPublic	R_Description	SongCount	R_IconId	CreatedDate	UpdatedDate	RepertoryName
2	a11e8400-e29b-41d4-a716-446655440abc	11111111-2222-3333-4444-555555555555	TRUE	My favorite codin	2	icon_rep1.png	2023-06-10T09:0	2023-06-10T09:0	Coding Essentials
3	b22e8400-e29b-41d4-a716-446655440def	66666666-7777-8888-9999-000000000000	FALSE	Chillout songs fo	1	icon_chill.png	2023-05-15T12:0	2023-05-20T08:1	Chill Playlist

USERS

A	B	C	D
1	user_id	username	email
2	101	melis98	melis@example.com
3	102	ahmet_kaya	ahmetk@example.org
4	103	zeyno2022	zeynep.zeyno@example.net

3 N F T A B L E S

U S E R S O N G T O N E S

	A	B	C	D	E
1	UserId	SongId	ToneId	CreatedDate	UpdatedDate
2	1111111-2222-3333-4444-555555555555	550e8400-e29b-41d4-a716-446655440000	1	2023-05-15T10:00:00Z	2023-05-15T10:00:00Z
3	66666666-7777-8888-9999-000000000000	660e8400-e29b-41d4-a716-446655440111	2	2023-06-01T12:30:00Z	2023-06-10T09:45:00Z

L I N K E D R E P E R T O R Y

	A	B
1	ReperitoryId	UserId
2	a11e8400-e29b-41d4-a716-446655440abc	1111111-2222-3333-4444-555555555555
3	b22e8400-e29b-41d4-a716-446655440def	66666666-7777-8888-9999-000000000000

F O L L O W E D A R T I S T S

	A	B
1	ArtistId	UserId
2	123e4567-e89b-12d3-a456-426614174000	1111111-2222-3333-4444-555555555555
3	223e4567-e89b-12d3-a456-426614174111	66666666-7777-8888-9999-000000000000

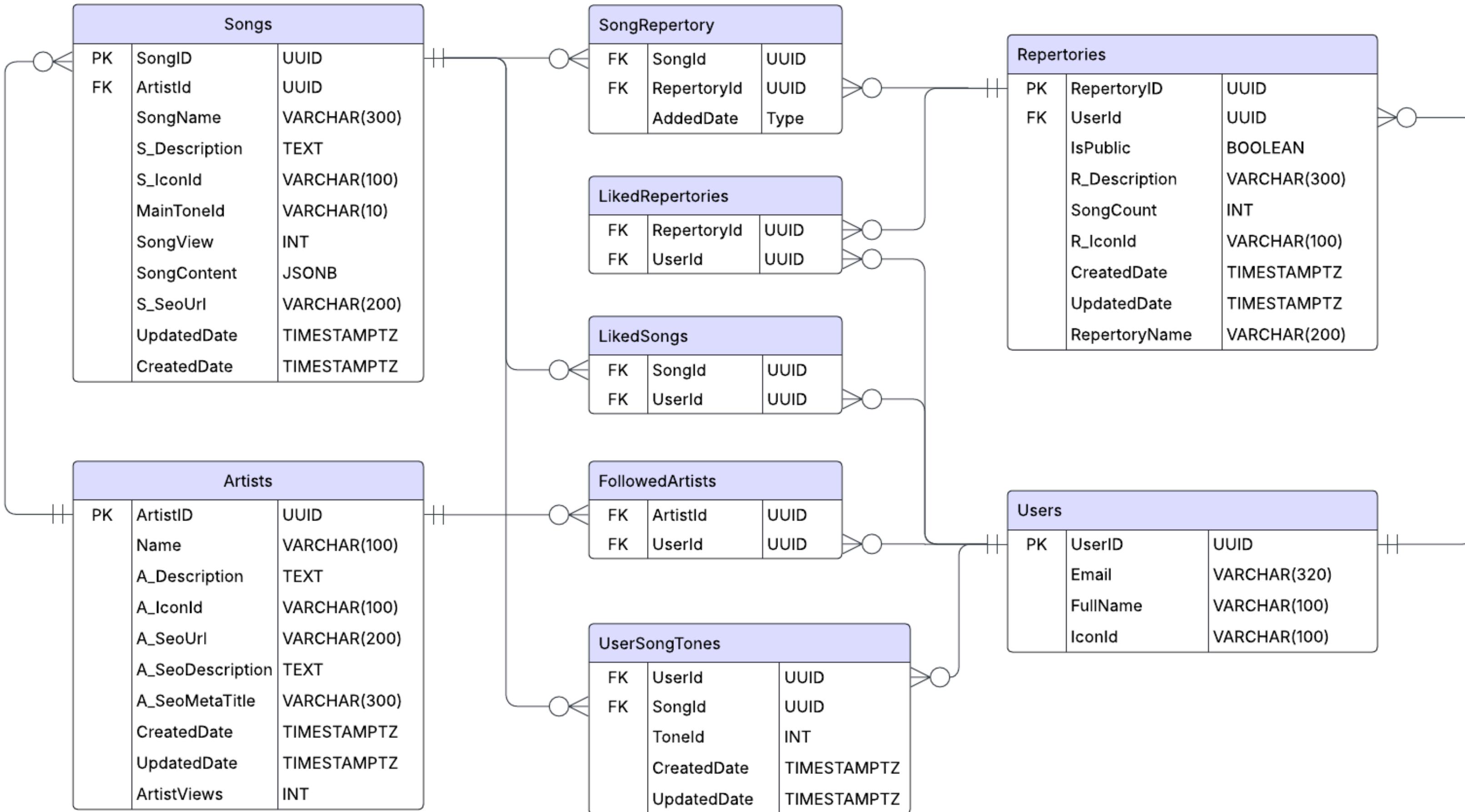
3 N F T A B L E S

L I K E D S O N G S

	A	B
1	SongId	UserId
2	550e8400-e29b-41d4-a716-446655440000	11111111-2222-3333-4444-555555555555
3	660e8400-e29b-41d4-a716-446655440111	66666666-7777-8888-9999-000000000000

U S E R S O N G T O N E S

	A	B	C	D	E
1	UserId	SongId	ToneId	CreatedDate	UpdatedDate
2	11111111-2222-3333-4444-555555555555	550e8400-e29b-41d4-a716-446655440000	1	2023-05-15T10:00:00Z	2023-05-15T10:00:00Z
3	66666666-7777-8888-9999-000000000000	660e8400-e29b-41d4-a716-446655440111	2	2023-06-01T12:30:00Z	2023-06-10T09:45:00Z



Create User

```
CREATE TABLE Users (
    UserID UUID PRIMARY KEY,
    Email VARCHAR(320) NOT NULL,
    FullName VARCHAR(100) NOT NULL,
    IconID VARCHAR(100),
);
INSERT INTO Users (UserID, Email, FullName, UserIconID)
SELECT DISTINCT
    UserID,
    Email,
    FullName,
    IconID,
    FROM Unnormalized_Data;
```



```
CREATE TABLE Artists (
    ArtistID UUID PRIMARY KEY,
    ArtistName VARCHAR(100) NOT NULL,
    ArtistViews INT DEFAULT 0,
    A_Description TEXT,
    A_IconID VARCHAR(100),
    A_SeoUrl VARCHAR(200),
    A_SeoDescription TEXT,
    A_SeoMetaTitle VARCHAR(300),
    CreatedDate TIMESTAMPTZ NOT NULL DEFAULT NOW(),
    UpdatedDate TIMESTAMPTZ,
);

INSERT INTO Artists (
    ArtistID, ArtistName, ArtistViews, A_Description, A_IconID,
    A_SeoUrl, A_SeoDescription, A_SeoMetaTitle,
    CreatedDate, UpdatedDate
)
SELECT DISTINCT
    ArtistID,
    ArtistName,
    0 -- ArtistViews
    A_Description,
    A_IconID,
    A_SeoUrl,
    A_SeoDescription,
    A_SeoMetaTitle,
    NOW() -- CreatedDate
    NULL -- UpdatedDate
FROM Unnormalized_Data;
```

Create Artist

Create Song

```
CREATE TABLE Songs (
    SongID UUID PRIMARY KEY,
    ArtistID UUID NOT NULL,
    SongName VARCHAR(200) NOT NULL,
    S_Description TEXT,
    S_IconID VARCHAR(100),
    MainToneID VARCHAR(10),
    SongView INT DEFAULT 0,
    SongContent JSONB,
    S_SeoUrl VARCHAR(200),
    CreatedDate TIMESTAMPTZ NOT NULL DEFAULT NOW(),
    UpdatedDate TIMESTAMPTZ,
    FOREIGN KEY (ArtistID) REFERENCES Artists(ArtistID)
);
INSERT INTO Songs (
    SongID, ArtistID, SongName, S_Description, S_IconID,
    MainToneID, SongView, SongContent, S_SeoUrl,
    CreatedDate, UpdatedDate
)
SELECT DISTINCT
    fnd.SongID,
    a.ArtistID,
    fnd.SongName,
    fnd.S_Description,
    fnd.S_IconID,
    fnd.MainToneID,
    0,
    fnd.SongContent,
    fnd.S_SeoUrl,
    NOW(),
    NULL
FROM FirstNormalized_Data fnd
JOIN Artists a ON a.ArtistName = fnd.ArtistName;
```

Create Repertory

```
CREATE TABLE Repertories (
    RepertoryID UUID PRIMARY KEY,
    UserID UUID NOT NULL,
    IsPublic BOOLEAN DEFAULT FALSE,
    R_Description TEXT,
    SongCount INT DEFAULT 0,
    R_IconID VARCHAR(100),
    RepertoryName VARCHAR(100) NOT NULL,
    CreatedDate TIMESTAMPTZ NOT NULL DEFAULT NOW(),
    UpdatedDate TIMESTAMPTZ,
    FOREIGN KEY (UserID) REFERENCES Users(UserID)
);
INSERT INTO Repertories (
    RepertoryID, UserID, IsPublic, R_Description,
    SongCount, R_IconID, RepertoryName,
    CreatedDate, UpdatedDate
)
SELECT DISTINCT
    RepertoryID,
    '11111111-1111-1111-1111-111111111111'::UUID AS UserID,
    FALSE,
    R_Description,
    0,
    R_IconID,
    RepertoryName,
    NOW(),
    NULL
FROM Unnormalized_Data;
```

User SongTone



```
CREATE TABLE UserSongTones (
    UserID UUID                      NOT NULL,
    SongID UUID                       NOT NULL,
    ToneID VARCHAR(10)                NOT NULL,
    CreatedDate TIMESTAMPTZ          NOT NULL DEFAULT NOW(),
    UpdatedDate TIMESTAMPTZ,
    PRIMARY KEY (UserID, SongID),
    FOREIGN KEY (UserID) REFERENCES Users(UserID),
    FOREIGN KEY (SongID) REFERENCES Songs(SongID)
);
```



```
CREATE TABLE LikedSongs (
    SongID UUID NOT NULL,
    UserID UUID NOT NULL,
    PRIMARY KEY (SongID, UserID),
    FOREIGN KEY (SongID) REFERENCES Songs(SongID),
    FOREIGN KEY (UserID) REFERENCES Users(UserID)
);
```

FollowedArtists

LikedSongs



```
CREATE TABLE FollowedArtists (
    ArtistID UUID NOT NULL,
    UserID UUID NOT NULL,
    PRIMARY KEY (ArtistID, UserID),
    FOREIGN KEY (ArtistID) REFERENCES Artists(ArtistID),
    FOREIGN KEY (UserID) REFERENCES Users(UserID)
);
```

SongRepetory

```
CREATE TABLE SongRepertory (
    SongID UUID          NOT NULL,
    RepertoryID UUID      NOT NULL,
    AddedDate TIMESTAMPTZ NOT NULL DEFAULT NOW(),
    PRIMARY KEY (SongID, RepertoryID),
    FOREIGN KEY (SongID) REFERENCES Songs(SongID),
    FOREIGN KEY (RepertoryID) REFERENCES Repertories(RepertoryID)
);
```

```
CREATE TABLE LikedRepertories (
    RepertoryID UUID      NOT NULL,
    UserID UUID          NOT NULL,
    PRIMARY KEY (RepertoryID, UserID),
    FOREIGN KEY (RepertoryID) REFERENCES Repertories(RepertoryID),
    FOREIGN KEY (UserID) REFERENCES Users(UserID)
);
```

LikedRepetories

PART III

HAKORU UI DEMO

hakoru.com

A A# B C ... G#

A

At the starting of the week

G

At summit talks you'll hear them speak

G A

It's only Monday

E

G

A

Tomorrow never comes until it's too late

HAKORU



Create new Repertory

```
INSERT INTO Repertories (
    Id,
    CreatedDate,
    Description,
    IconId,
    Name,
    PublicRepertory,
    SongCount,
    UpdatedDate,
    UserId
)
VALUES (
    '038c3528-4ea1-4f43-975c-61f77bc760b6',
    '2025-05-11T14:42:10.0076142Z',
    'For presentation',
    'default',
    'DATABASE-1',
    FALSE,
    0,
    '2025-05-11T14:42:10.0076664Z',
    '2f6af570-86fb-4f43-975c-61f77bc760b6'
);
```

Search a song

```
(  
    -- 1. S0ng name,Artist Name, SongContent  
    SELECT  
        'song' AS Type,  
        s.SongName AS Title,  
        a.ArtistName AS Subtitle,  
        s.SongID AS RefID  
    FROM Songs s  
    JOIN Artists a ON s.ArtistID = a.ArtistID  
    WHERE  
        s.SongName ILIKE '%' || :term || '%'  
        OR a.ArtistName ILIKE '%' || :term || '%'  
        OR s.SongContent::TEXT ILIKE '%' || :term || '%'  
  
    UNION  
  
    -- 2. Repertory name  
    SELECT  
        'repertory' AS Type,  
        r.RepertoryName AS Title,  
        u.FullName AS Subtitle,  
        r.RepertoryID AS RefID  
    FROM Repertories r  
    JOIN Users u ON r.UserID = u.UserID  
    WHERE  
        r.RepertoryName ILIKE '%' || :term || '%'  
)  
ORDER BY Type ASC, Title ASC  
LIMIT 10;
```

Changing Tone

```
● ● ●

SELECT
    SongID,
    MainToneID,
    SongContent
FROM Songs
WHERE S_SeoUrl = 'ay-tenli-kadin-ufuk-beydemir'
LIMIT 1;

UPDATE Songs
SET
    MainToneID = 13,                                -- yeni seçilen ton
    UpdatedDate = NOW()
WHERE SongID = 'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587';
```



Saving New Tone

```
SELECT
    UserID,
    SongID,
    ToneID,
    CreatedDate,
    UpdatedDate
FROM UserSongTones
WHERE UserID = '2f6af570-86fb-4f43-975c-61f77bc760b6'
    AND SongID = 'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587'
LIMIT 1;

INSERT INTO UserSongTones (
    UserID, SongID, ToneID, CreatedDate, UpdatedDate
)
VALUES (
    '2f6af570-86fb-4f43-975c-61f77bc760b6',
    'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587',
    7,
    NOW(),
    NULL
);
```

Original tone



```
SELECT  
    MainToneID  
FROM Songs  
WHERE S_SeoUrl = 'ay-tenli-kadin-ufuk-beydemir'  
LIMIT 1;
```

Like Song

```
● ● ●  
SELECT  
    LikedDate,  
    SongID,  
    UserID  
FROM LikedSongs  
WHERE SongID = 'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587'  
    AND UserID = '2f6af570-86fb-4f43-975c-61f77bc760b6'  
LIMIT 1;  
  
INSERT INTO LikedSongs (LikedDate, SongID, UserID)  
VALUES (  
    NOW(),  
    'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587',  
    '2f6af570-86fb-4f43-975c-61f77bc760b6'  
);
```

Unlike Song



```
SELECT  
    LikedDate,  
    SongID,  
    UserID  
FROM LikedSongs  
WHERE SongID = 'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587'  
    AND UserID = '2f6af570-86fb-4f43-975c-61f77bc760b6'  
LIMIT 1;  
  
DELETE FROM LikedSongs  
WHERE SongID = 'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587'  
    AND UserID = '2f6af570-86fb-4f43-975c-61f77bc760b6';
```

Add Song to Repertory

```
SELECT  
    RepertoryID,  
    RepertoryName,  
    SongCount,  
    UpdatedDate  
FROM Repertories  
WHERE RepertoryID = '038c3528-4ea1-4c0a-8a57-a898f3c5e0a2'  
LIMIT 1;  
  
INSERT INTO SongRepertory (RepertoryID,SongID)  
VALUES (  
    '038c3528-4ea1-4c0a-8a57-a898f3c5e0a2',  
    'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587',  
);  
  
UPDATE Repertories  
SET  
    SongCount = SongCount + 1,  
    UpdatedDate = NOW()  
WHERE RepertoryID = '038c3528-4ea1-4c0a-8a57-a898f3c5e0a2';
```

Delete Song from Repertory

```
SELECT
    RepertoryID,
    SongCount,
    UpdatedDate
FROM Repertories
WHERE RepertoryID = '038c3528-4e1-4c0a-8a57-a898f3c5e0a2'
LIMIT 1;

SELECT
    RepertoryID,
    SongID,
    AddedDate
FROM SongRepertory
WHERE RepertoryID = '038c3528-4e1-4c0a-8a57-a898f3c5e0a2'
    AND SongID = 'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587'
LIMIT 1;

DELETE FROM SongRepertory
WHERE RepertoryID = '038c3528-4e1-4c0a-8a57-a898f3c5e0a2'
    AND SongID = 'a7ab74c4-ae8f-4604-ae72-e6c66a8a8587';

UPDATE Repertories
SET
    SongCount = SongCount - 1,
    UpdatedDate = NOW()
WHERE RepertoryID = '038c3528-4e1-4c0a-8a57-a898f3c5e0a2';
```

Update Repertory

```
SELECT
    RepertoryID,
    R_Description,
    R_IconID,
    RepertoryName,
    IsPublic,
    SongCount,
    UpdatedDate
FROM Repertories
WHERE RepertoryID = '038c3528-4ea1-4c0a-8a57-a898f3c5e0a2'
LIMIT 1;

UPDATE Repertories
SET
    R_Description = 'For presentation UPDATED desc.',
    R_IconID = 'repertory-11-icon',
    AND UserID = :currentUserID;  ne = 'DATABASE-2',
    Ispublic = True,
    UpdatedDate = NOW()
WHERE RepertoryID = '038c3528-4ea1-4c0a-8a57-a898f3c5e0a2';
```

Delete Repertory

```
● ● ●  
  
SELECT  
    RepertoryID,  
    R_Description,  
    R_IconID,  
    RepertoryName,  
    IsPublic,  
    SongCount,  
    UpdatedDate  
FROM Repertories  
WHERE RepertoryID = '038c3528-4ea1-4c0a-8a57-a898f3c5e0a2'  
LIMIT 1;  
  
DELETE FROM Repertories  
WHERE RepertoryID = '038c3528-4ea1-4c0a-8a57-a898f3c5e0a2';  
  
-- ON DELETE CASCADE DEFINED BEFORE
```

We are trying to add " soft delete " feature. Coming soon

Repertory Page

```
•••  
  
SELECT  
    s.SongID,  
    s.SongName,  
    a.ArtistName,  
    sr.AddedDate  
FROM SongRepertory sr  
  
JOIN Songs s ON sr.SongID = s.SongID  
JOIN Artists a ON s.ArtistID = a.ArtistID  
JOIN Repertories r ON r.RepertoryID = sr.RepertoryID  
  
WHERE sr.RepertoryID = :selectedRepertoryID  
    AND (r.IsPublic = TRUE OR r.UserID = :currentUserID)  
ORDER BY sr.AddedDate ASC;
```

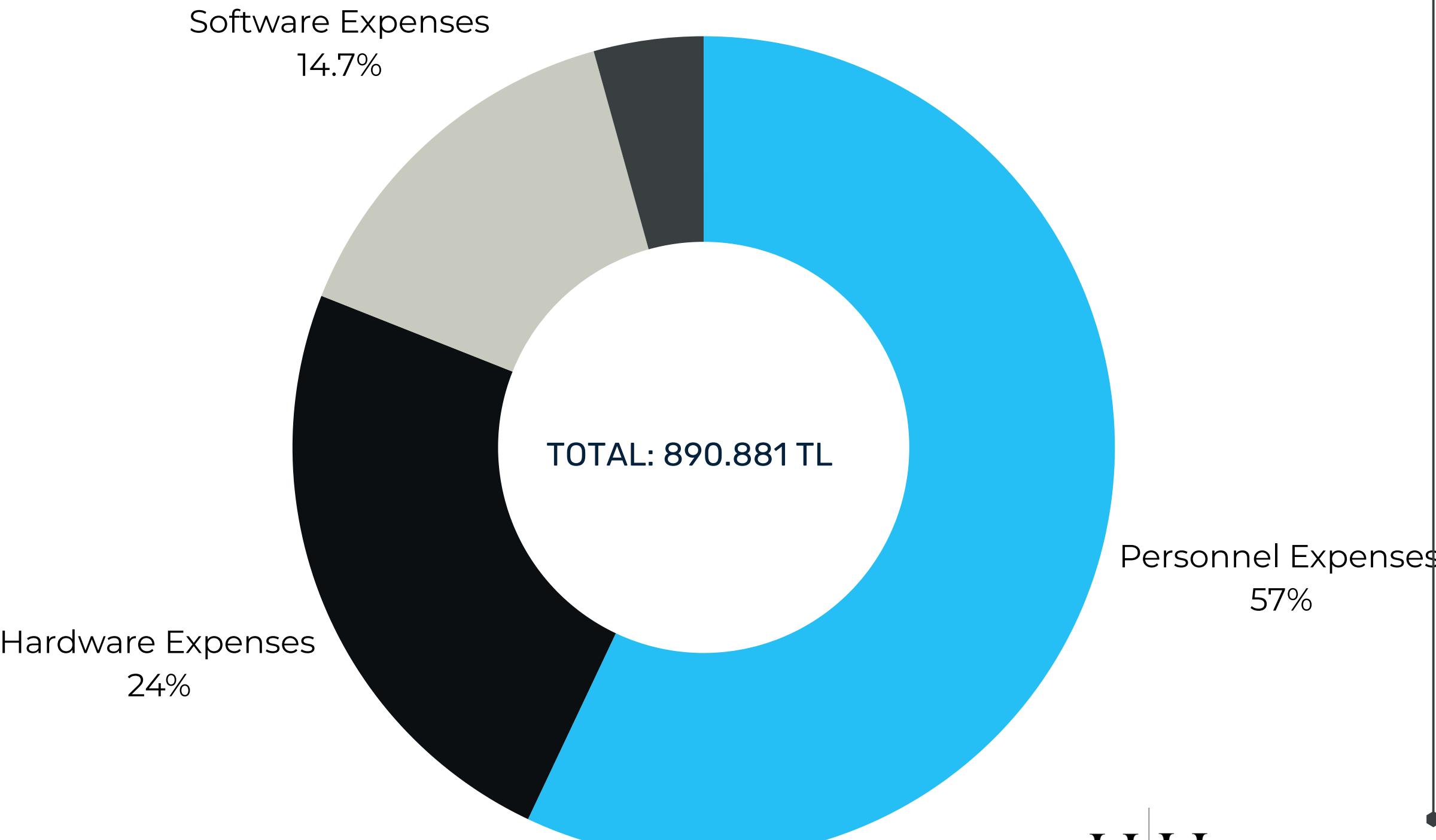
Song Page



```
SELECT
    s.SongID,
    s.SongName,
    s.MainToneID,
    s.SongView
FROM Songs s
WHERE s.ArtistID =
    (SELECT ArtistID FROM Artists WHERE A_SeoUrl = :artistSlug)
ORDER BY s.CreatedDate DESC;
```



PROJECT BUDGET



I A K O R
I I U

Employee Expenses

508.000 TL

Hardware Expenses

213.660 TL

Service Purchase Expenses

38.400 TL

Software Expenses

130.821 TL

- GROUP 16 -
THANKS FOR LISTENING



HAKORU

AI-POWERED DIGITAL MUSIC REPERTORY LIBRARY