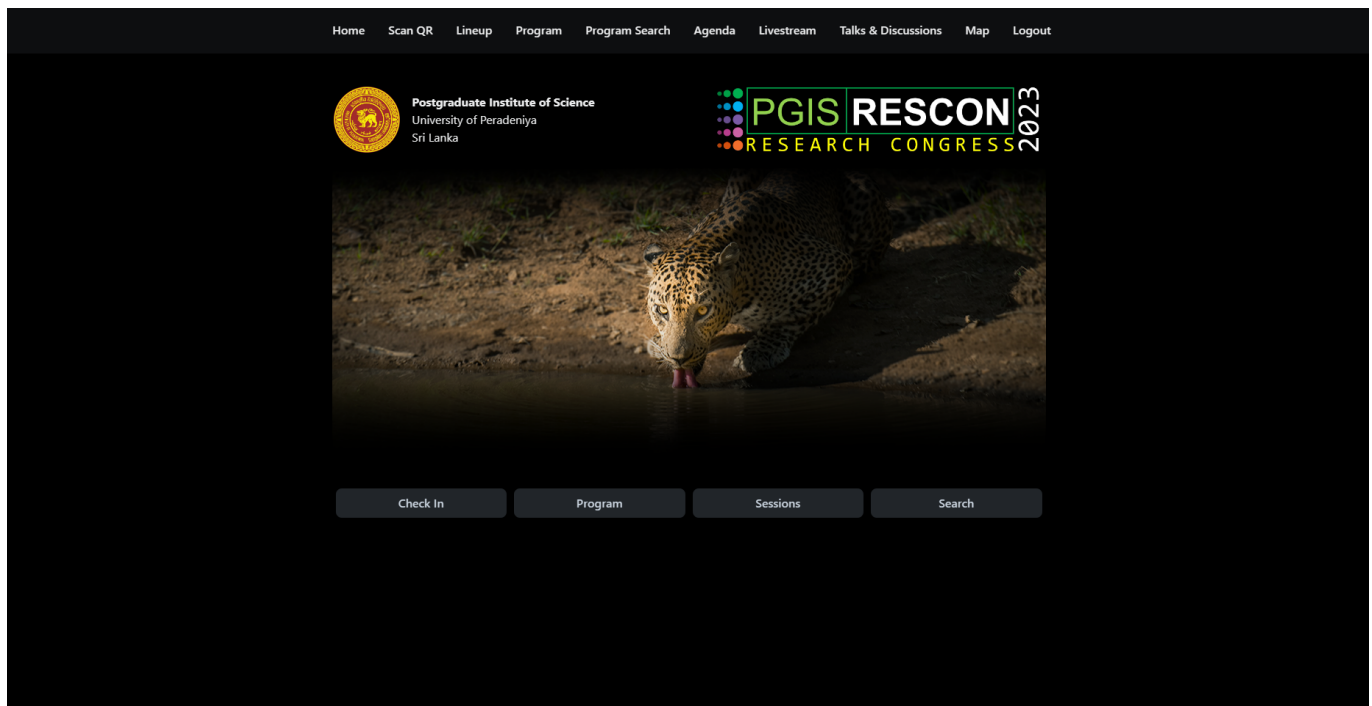


RESCON



A utility application for session management in events. Primarily being developed as a dedicated platform for the annual research conference of PGIS, University of Peradeniya. Tailored for the university's research community, this app aims to enhance the conference experience by facilitating easy exploration of research and innovations.

Tech Stack Overview

- Backend Server: Nest.js
- Frontend Server: Next.js
- API architecture: REST
- Database: PostgreSQL

Setting up the development server

Prerequisites

- Node.js (14+)
- pnpm
- postgres or mysql

Install dependencies

```
# clone the repo
https://github.com/kodiidok/rescon.git

# enable corepack
corepack enable
```

```
# go to frontend directory and install dependencies
pnpm install

# go to backend directory and install dependencies
pnpm install
```

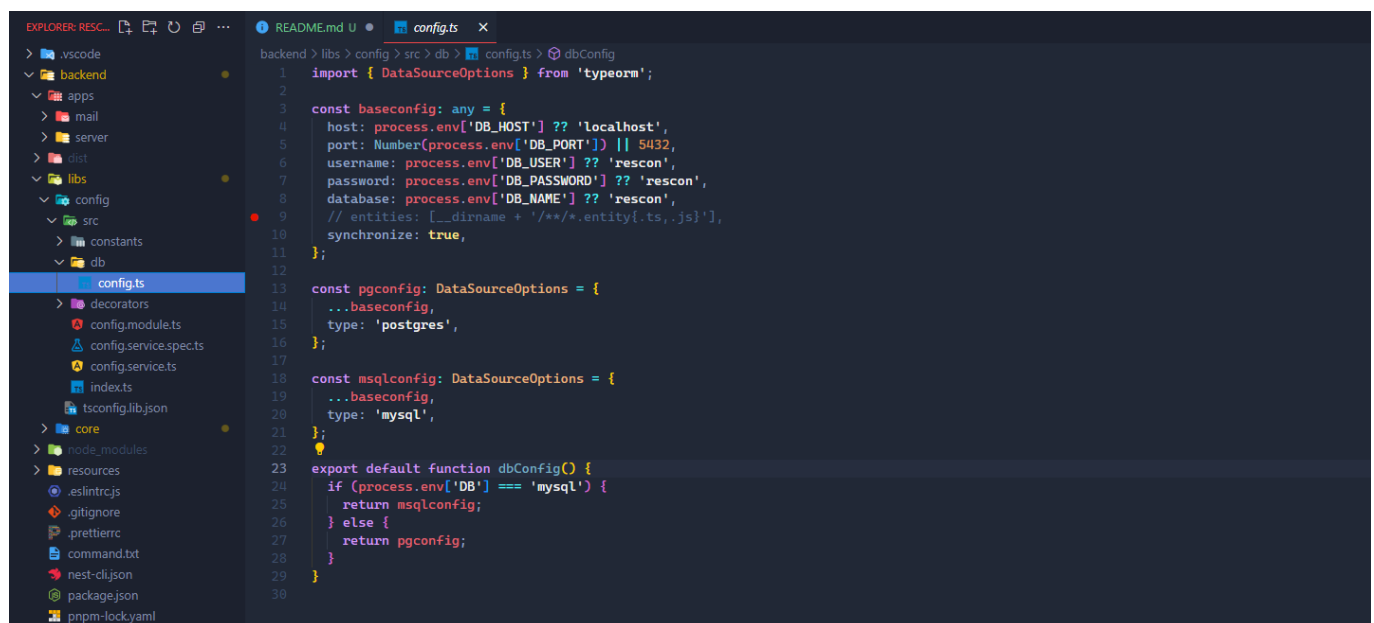
Configure Environment Variables

Create a `.env` file in the `backend/` directory and add the correct configurations for each variable.

```
DB="postgres"
DB_HOST="localhost"
DB_PORT=3003
DB_USERNAME="rescon"
DB_PASSWORD="rescon"
DB_NAME="rescon"
PORT=3333
UI="http://localhost:3000"
```

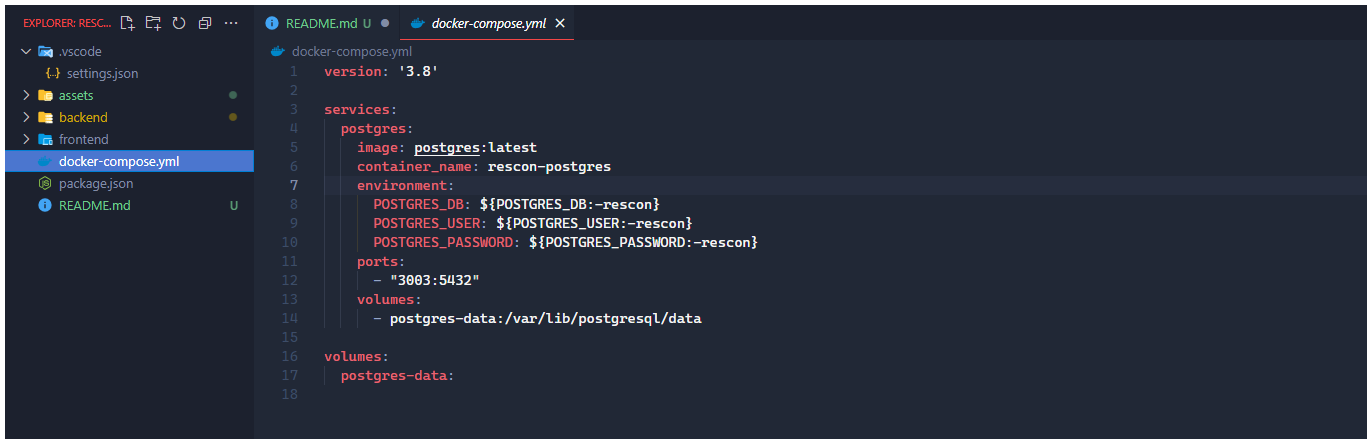
Configure database

Change the database configuration file in `backend\libs\config\src\db\config.ts` to connect your database.



```
backend > libs > config > src > db > config.ts > dbConfig
1 import { DataSourceOptions } from 'typeorm';
2
3 const baseconfig: any = {
4   host: process.env['DB_HOST'] ?? 'localhost',
5   port: Number(process.env['DB_PORT']) || 5432,
6   username: process.env['DB_USER'] ?? 'rescon',
7   password: process.env['DB_PASSWORD'] ?? 'rescon',
8   database: process.env['DB_NAME'] ?? 'rescon',
9   // entities: [...dirname + '/*.entity.{ts,js}'],
10  synchronize: true,
11 };
12
13 const pgconfig: DataSourceOptions = {
14   ...baseconfig,
15   type: 'postgres',
16 };
17
18 const mysqlconfig: DataSourceOptions = {
19   ...baseconfig,
20   type: 'mysql',
21 };
22
23 export default function dbConfig() {
24   if (process.env['DB'] === 'mysql') {
25     return mysqlconfig;
26   } else {
27     return pgconfig;
28   }
29 }
30
```

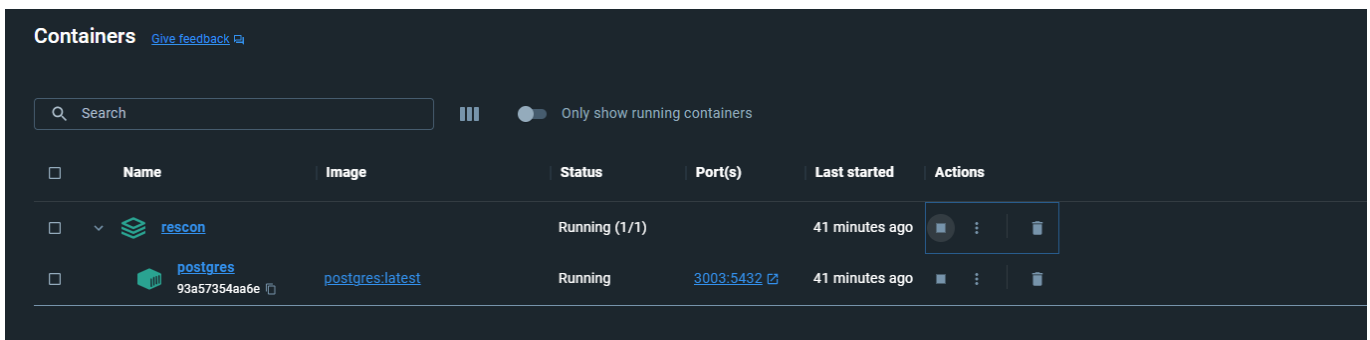
If you prefer to use docker, a postgres database is already initialized with the current server. Use the `dev.docker-compose.yml` file to connect to it.



```
# go to the root of the project and start the docker container
docker compose -f dev.docker-compose up -d

# you can also provide credentials as environment variables (or an .env file)
POSTGRES_DB=database POSTGRES_USER=username POSTGRES_PASSWORD=password docker-
compose up -d
```

The docker database should start as follows.



To access the docker postgres database, use psql

```
psql -h localhost -p port -U username -d database
```

Backup Sample Data

If you are using a standalone postgres server, then backup the database using the file `assets/db/backup.sql`. Make sure the version of postgres is 16.0

If you are using the docker container for the database,

```
# go to the assest folder, then copy the sql file to the docker container
cd assets/db
docker cp backup.sql rescon-postgres:/backup.sql

# access the docker container
docker exec -it rescon-postgres bash
```

```
# restore the backup
psql -U rescon -d rescon -f backup.sql
```

Test the server in localhost

```
# go to frontend and run
pnpm dev

# go backend and run
pnpm start:dev
```

If the backend server doesn't connect to the database even with the correct credentials, provide the details of the database as environment variables when starting the app.

```
DB_HOST=localhost DB_PORT=port DB_USER=user DB_PASSWORD=password DB_NAME=rescon
pnpm start:dev
```

Assuming the frontend port is 3000 and the backend port is 3333,

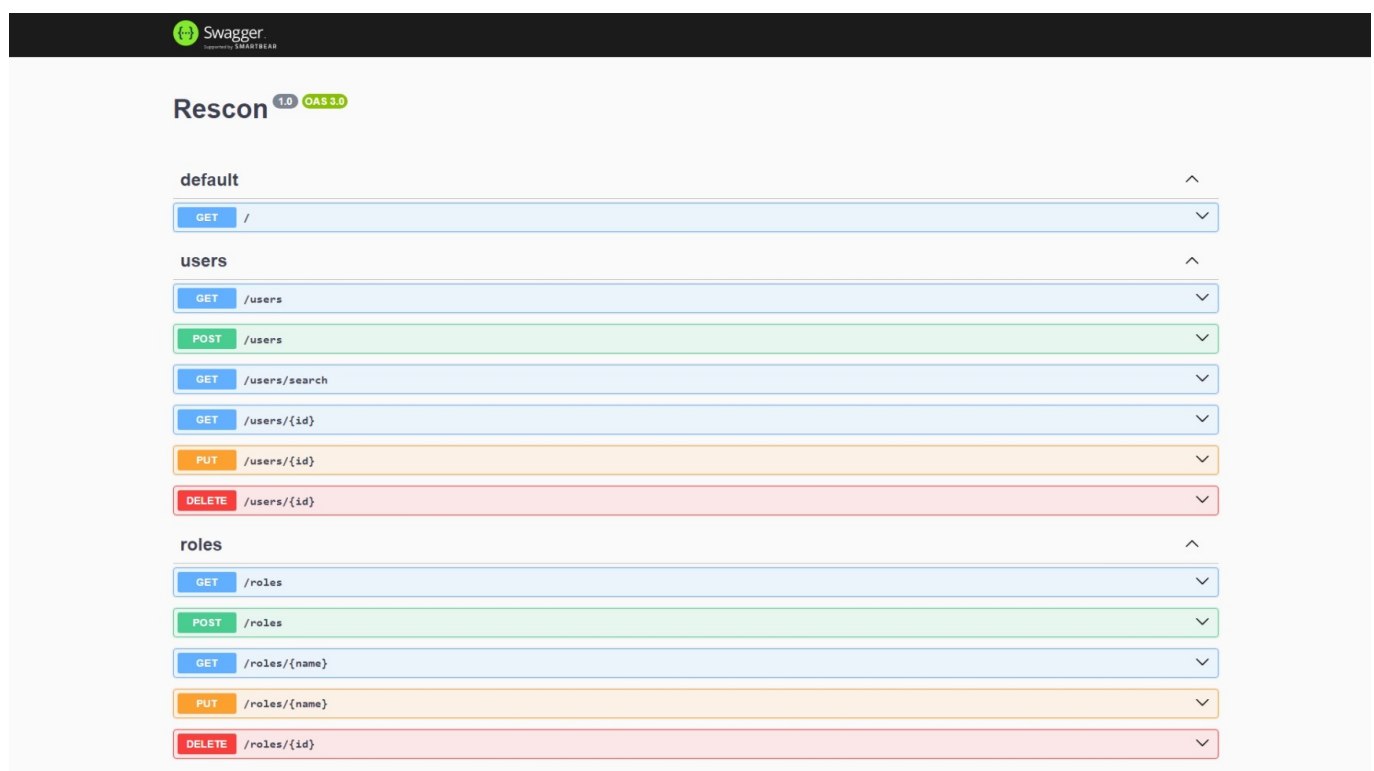
Frontend starts on <http://localhost:3000/>

Backend starts on <http://localhost:3333/>

Swagger starts on <http://localhost:3333/api/>

API Testing

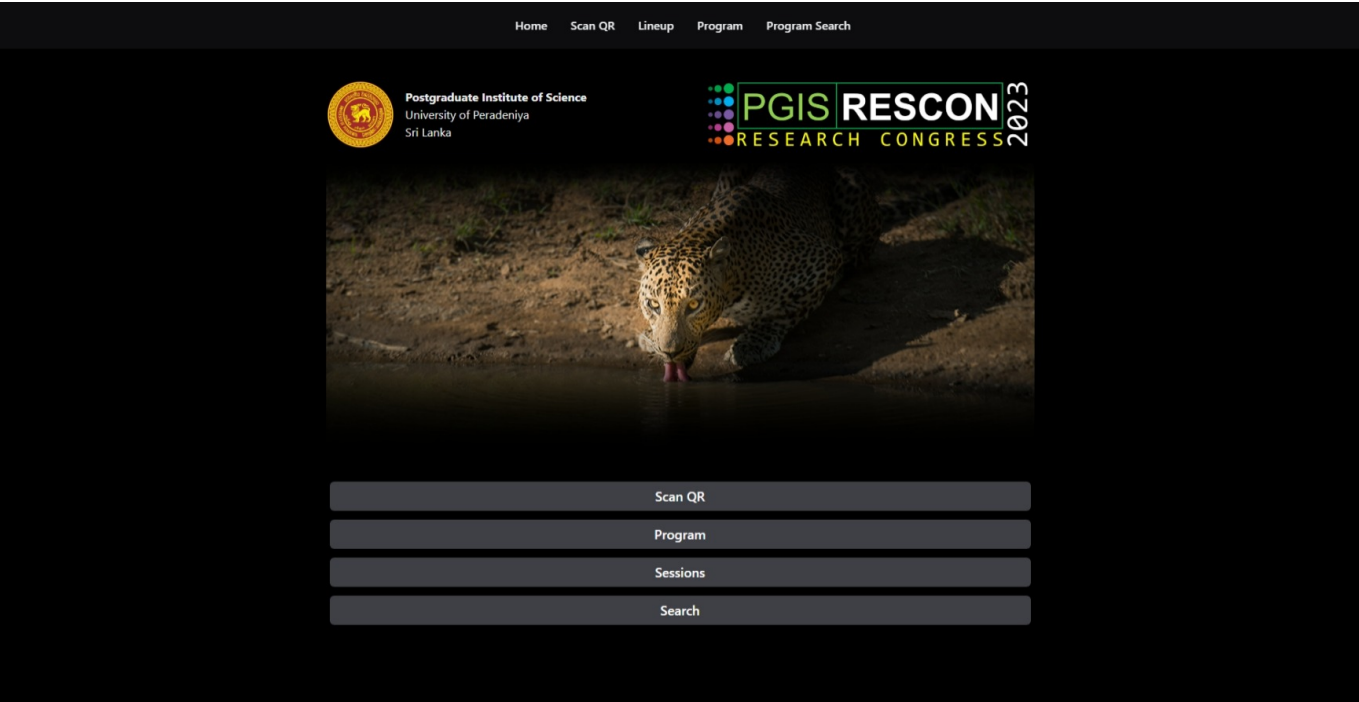
You can access the Swagger API via <http://localhost:3333/api/> to check the APIs.



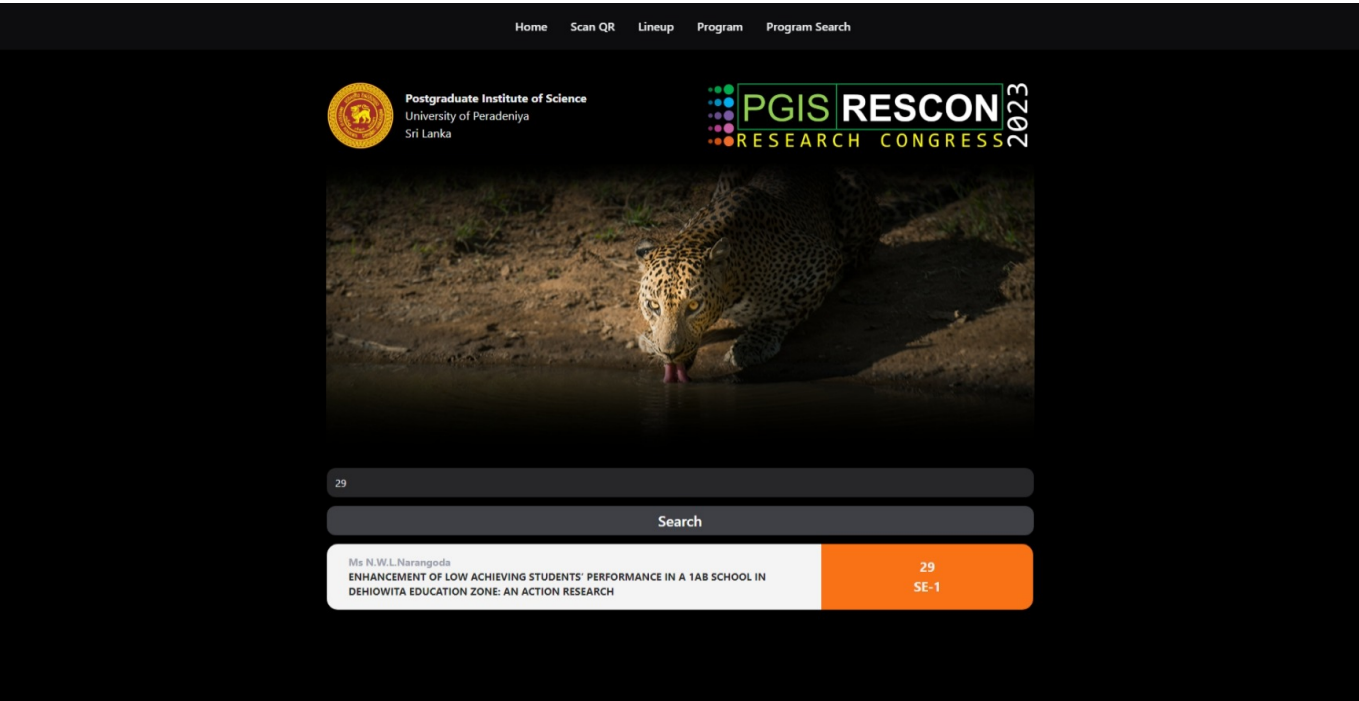
session-items		^
GET	/session-items	v
GET	/session-items/search	v
GET	/session-items/{id}	v
PUT	/session-items/{id}	v
DELETE	/session-items/{id}	v
GET	/session-items/abstract/{id}	v
GET	/session-items/session/{id}	v
POST	/session-items/items	v
sessions		^
GET	/sessions	v
POST	/sessions	v
GET	/sessions/{id}	v
PUT	/sessions/{id}	v
DELETE	/sessions/{id}	v
GET	/sessions/category/{name}	v
GET	/sessions/date/{date}	v
panal-discussions		^
GET	/panal-discussions	v
POST	/panal-discussions	v
GET	/panal-discussions/{id}	v
DELETE	/panal-discussions/{id}	v
PUT	/panal-discussions/{sessionId}	v
plenary-talks		v
Schemas		^
UserEntity >		
CreateUserDto >		
UpdateUserDto >		
RoleEntity >		
CreateRoleDto >		
UpdateRoleDto >		
SessionItemEntity >		
CreateSessionItemDto >		
UpdateSessionItemDto >		
SessionEntity >		
CreateSessionDto >		
UpdateSessionDto >		
PanalDiscussionEntity >		
CreatePanalDiscussionDto >		
UpdatePanalDiscussionDto >		
PlenaryTalkEntity >		
CreatePlenaryTalkDto >		
UpdatePlenaryTalkDto >		

Interfaces

The current version of RESCON23 has the following interfaces. All these interfaces are optimized for both mobile and web views.



Title: RESCON Homepage Description: This image showcases the homepage interface of RESCON23, featuring a user-friendly layout and intuitive navigation.



Title: RESCON Search Interface Description: The search interface of RESCON23 allows users to easily search and find relevant content, enhancing user experience and accessibility.

HomeScan QRLineupProgramProgram Search

<

Life Sciences

>

Program

3rd4th of November

Session ID: LS-1

Location C2.4

Session Chairs

Prof. S.C.K. Rubasinghe

Time	Abstract Id	Title	Presenter
12:30 12:45	153	MORPHOMETRIC ANALYSIS OF GENUS PIPER (PIPERACEAE), SRI LANKA	Mr Gopallawa B.
12:15 12:30	123	BIOACTIVITY STUDIES OF SOLVENT EXTRACTS OF PIPER NIGRUM SEEDS	Ms G. G. S. Sithumini
11:00 11:15	5	ETHNOBOTANY OF MEDICINAL PLANTS IN TREATING DIABETES MELLITUS AMONG INDIGENOUS MEDICAL PRACTITIONERS IN JAFFNA, SRI LANKA	Ms N.Nihika Priyadarshani
11:15 11:30	15	EVALUATION OF TOXICITY OF AQUEOUS EXTRACT OF HEMIDESMUS INDICUS R. BR. (RAMUSU) USING BRINE SHRIMP ASSAY	Mr H.D.T. Madhuranga
12:00 12:15	117	BIOACTIVITY STUDIES OF ALPINIA CALCARATA AND GLORIOSA SUPERBA LEAVES EXTRACTS	Ms E.M.T.A. Ekanayaka
11:45 12:00	46	REVIEW ON SRI LANKAN MEDICINAL PLANTS WITH POTENT TYROSINASE INHIBITORY ACTIVITY (A PRELIMINARY REVIEW)	Ms B.W.A.S.Gunaratna
11:30 11:45	39	TOXICITY OF HYLOCEREUS POLYRHIZUS SEEDS USING BRINE SHRIMP ASSAY	Ms M. R. Kalidha Farween

Session ID: LS-2

Location A1.1

Session Chairs

Dr. Sampath Lokugalappatti

Time	Abstract Id	Title	Presenter
11:45 12:00	138	Microplastics contamination in Indian backwater oysters (Magallana bilineata) in the Panadura estuary, Sri Lanka.	Ms M.K.R.A.W.S.N.Nawarathna
11:00 11:15	57	FIRST MOLECULAR PHYLOGEOGRAPHIC AFFINITIES OF SAW-SCALED VIPER OF THE GENUS ECHIS (SERPENTES: VIPERIDAE) FROM SRI LANKA	Dr A.Murugananthan
11:30 11:45	125	DIVERSITY OF ICHTHYO FAUNA AT THE UPPER NORTHERN BASIN OF THONDAMANARU LAGOON, JAFFNA, SRILANKA	Ms S.Aniththa
12:15 12:30	192	IMPACT OF HABITAT TYPE AND FLORAL RESOURCE AVAILABILITY ON GROUND-NESTING BEE ESTABLISHMENT IN AN AGRO-NATURAL LANDSCAPE	Ms E.M.D. Ekanayake
11:15 11:30	88	CHALLENGES IN CONTROLLING INSECT PESTS OF STORED GRAIN PRODUCTS IN SRI LANKA: INSIGHTS INTO INSECTICIDE METABOLIZING ENZYMES AND TARGET-SITE ALTERATIONS	Ms G.N.P.V. Anuradha
12:00 12:15	166	ETHNOMEDICAL SURVEY ON SRI LANKAN HASTI VEDAKAMA; A STUDY BASED ON ELEPHANT CLUSTER AT THE TEMPLE OF THE TOOTH RELIC	Ms A.M.G.H.K.Athapaththu

Session ID: LS-3

Location C2.4

Session Chairs

Prof. R.S. Rajakanuna

Time	Abstract Id	Title	Presenter
15:00 12:03	79	EFFECT OF PH ON THE GROWTH AND DEVELOPMENT OF IMMATURE STAGES OF DENGUE VECTOR MOSQUITOES: AEDES ALBOPICTUS	Ms K.M.K.S Dissanayake
15:30 15:45	178	PANTALA FLAVESCENS (WANDERING GUIDER) AND CERIAGRION COROMANDELIANUM (YELLOW WAXTAIL) AS PREDATORS OF PREIMAGINAL STAGES OF AEDES AEGYPTI (DIPTERA: CULICIDAE) IN FRESH AND BRACKISH WATER HABITATS FROM JAFFNA, NORTHERN SRI LANKA.	Mr S.Arthyan
15:15 15:30	176	CYTOKINE RESPONSES OF DIFFERENT CATEGORIES OF LYMPHATIC FILARIASIS PATIENTS IN GALLE DISTRICT, SRI LANKA	Dr I. E. Gunaratna
14:30 14:45	22	OVIDICAL AND OVIPOSITION DETERRENCE PROPERTIES OF TABERNAEMONTANA DIVARICATA (APOCYNACEAE) AGAINST AEDES ALBOPICTUS AND CULEX QUINQUEFASCIATUS IN SRI LANKA	Ms W.M.S.H. Wijesundara
14:45 15:00	26	EFFECT OF PHYSICOCHEMICAL PARAMETERS OF BREEDING WATER ON FITNESS OF DENGUE VECTOR MOSQUITOES	Ms W.M.S.H. Wijesundara
14:00 14:15	10	CUTICLE THICKNESS OF LARVAE OF PYRETHROID RESISTANT CULEX QUINQUEFASCIATUS MOSQUITOES IN SRI LANKA	Ms S N Palliyagunu
14:15 14:30	11	MOSQUITOCIDAL POTENTIAL OF ETHANOLIC ALLIUM SATIVUM (GARLIC) EXTRACTS AGAINST AEDES AND CULEX MOSQUITO LARVAE IN SRI LANKA	Ms W.R.G.W.N.Rajapaksha

Session ID: LS-4

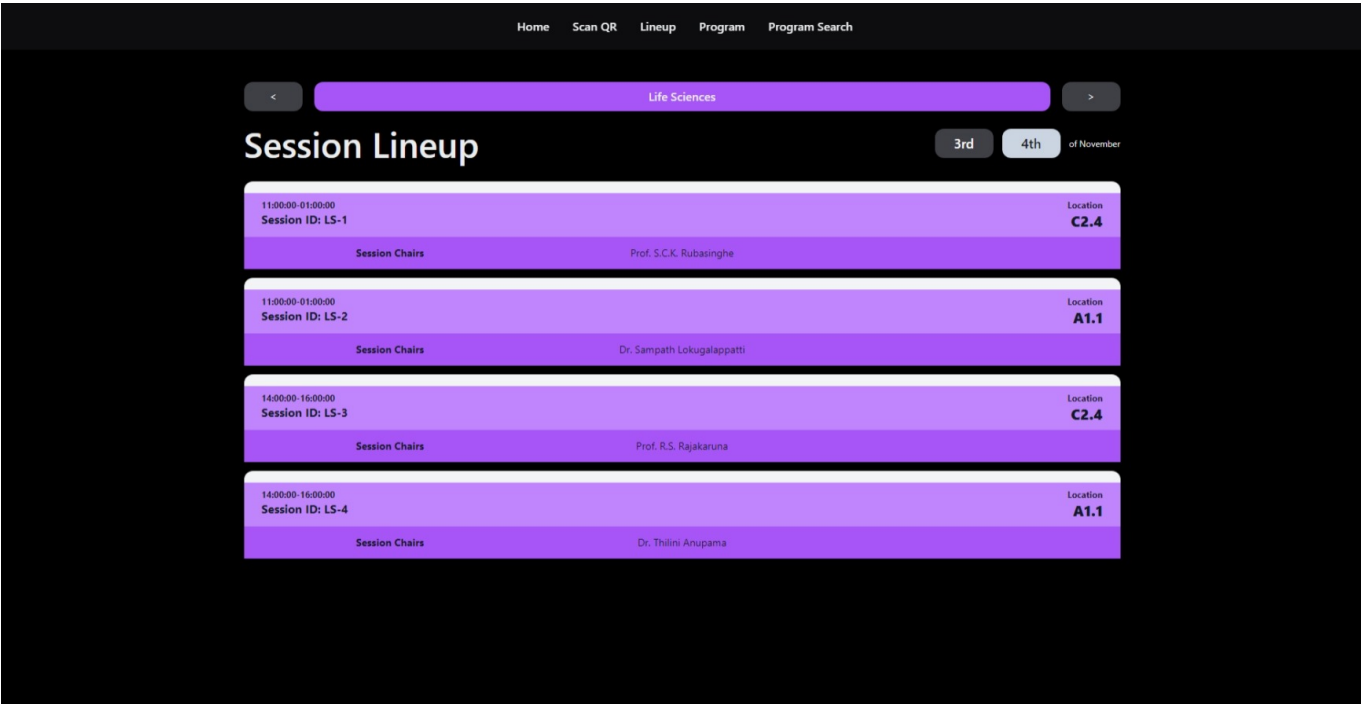
Location A1.1

Session Chairs

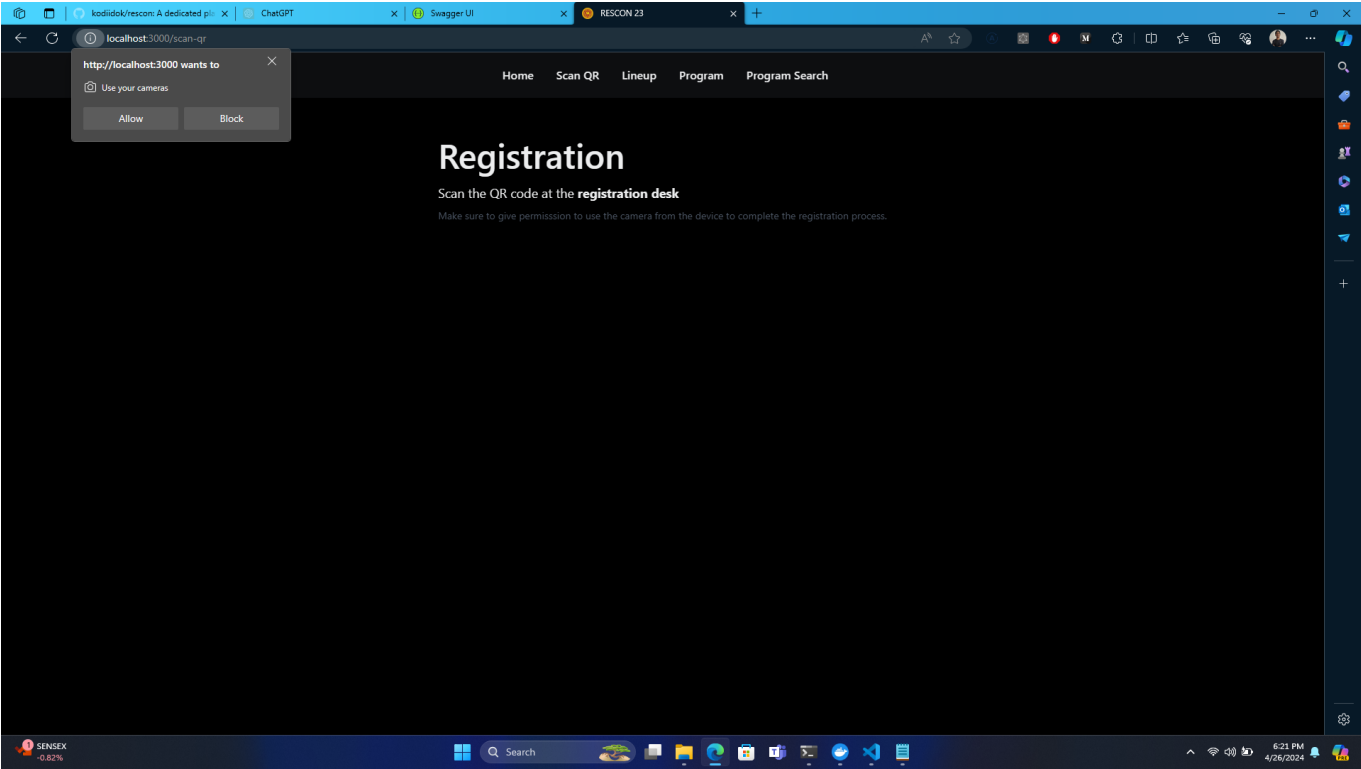
Dr. Thilini Anupama

Time	Abstract Id	Title	Presenter
15:00 12:03	82	ASSESSMENT OF RETAINED MICROFLORA AND THE PRESENCE OF HUMAN DNA ON USED TOOTHBRUSHES USING PCR	Ms J.G.A.S.S.GAMAGE
14:15 14:30	43	PRELIMINARY STUDY OF USE OF FRACTIONS ISOLATED FROM CRUDE LYSATE OF Leishmania IN SEROLOGY AND ANALYSIS OF CLINICAL EPIDEMIOLOGICAL DATA	Ms M.G.Achini Udeshika
15:30 15:45	143	EVALUATION OF PRIMERS DESIGNED FOR NESTED PCR TO DETECT P2 CLADE OF LEPTOSPIRES CAUSE LEPTOSPIROSIS IN HUMANS AND ANIMALS	Ms W.M.M. Nadeeshani
14:30 14:45	49	CUTANEOUS LEISHMANIASIS: AWARENESS OF PUBLIC ABOUT THE DISEASE AND THE VECTOR IN SRI LANKA	Ms G.D.S.R.Piumali
14:45 15:00	52	COMPARATIVE EVALUATION OF RT-PCR KITS AVAILABLE IN SRI LANKA FOR DIAGNOSIS OF SARS-CoV-2	Mr A.A.K.P.Amarasinghe
15:15 15:30	84	ANAPLASMOSIS IN DOGS: A REVIEW ON SOUTH AND SOUTH EAST ASIAN COUNTRIES	Dr Perera S.V.N.
14:00 14:15	21	CULTURALLY RELEVANT PAIN COPING SKILLS GROUP INTERVENTION FOR CHRONIC KNEE OSTEOARTHRITIS PAIN: DELPHI CONSENSUS	Ms M. K. U. M. Gunasekara

Title: RESCON Program Lineup Description: This image displays the program lineup interface of RESCON23, providing users with a comprehensive overview of scheduled events and sessions.



Title: RESCON Session Lineup Description: The session lineup interface of RESCON23 enables users to view detailed information about upcoming sessions and presentations, aiding in planning and scheduling.



Title: RESCON QR Code Scanner Description: This image illustrates the QR code scanning interface of RESCON23, allowing attendees to quickly access event information and resources using their mobile devices.

Database Schema

```
rescon=# \dt
          List of relations
Schema |      Name      | Type  | Owner
-----+-----+-----+-----
public | panal_discussions | table | rescon
```



```
public | plenary_talks      | table | rescon
public | roles                  | table | rescon
public | session_chairs         | table | rescon
public | session_items          | table | rescon
public | sessions               | table | rescon
public | users                  | table | rescon
(7 rows)
```

```
rescon=# \d roles

                                Table "public.roles"
   Column   |          Type          | Collation | Nullable |   Default
-----+-----+-----+-----+-----
id          | uuid                  |           | not null |
uuid_generate_v4()
created_at  | timestamp without time zone |           | not null | now()
updated_at  | timestamp without time zone |           | not null | now()
name        | text                  |           | not null |
Indexes:
    "PK_c1433d71a4838793a49dcad46ab" PRIMARY KEY, btree (id)
    "UQ_648e3f5447f725579d7d4ffdfb7" UNIQUE CONSTRAINT, btree (name)
Referenced by:
    TABLE "users" CONSTRAINT "FK_39f0c2dc962af79c0dabfed43eb" FOREIGN KEY
(role_name) REFERENCES roles(name)
```

```
rescon=# \d users

                                Table "public.users"
   Column   |          Type          | Collation | Nullable |   Default
-----+-----+-----+-----+-----
id          | uuid                  |           | not null |
uuid_generate_v4()
created_at  | timestamp without time zone |           | not null | now()
updated_at  | timestamp without time zone |           | not null | now()
username    | character varying      |           | not null |
email       | character varying      |           | not null |
password    | character varying      |           | not null |
name        | character varying      |           |          |
role_name   | text                   |           |          |
chairing_sessions | text                   |           |          |
nic         | character varying      |           |          |
presenting_sessions | text                   |           |          |
institute   | character varying      |           |          |
registered  | boolean                |           |          |
registeredAt | character varying      |           |          |
studentRegNo | character varying      |           |          |
Indexes:
    "PK_a3ffb1c0c8416b9fc6f907b7433" PRIMARY KEY, btree (id)
```

Foreign-key constraints:

"FK_39f0c2dc962af79c0dabfed43eb" FOREIGN KEY (role_name) REFERENCES roles(name)

Referenced by:

TABLE "session_chairs" CONSTRAINT "FK_854f05eee1caae7decd9130d4d6" FOREIGN KEY (session_chair_id) REFERENCES users(id) ON UPDATE CASCADE ON DELETE SET NULL

TABLE "session_items" CONSTRAINT "FK_adf2dab2d30bb46e4490a684182" FOREIGN KEY (presenter_id) REFERENCES users(id)

Table "public.sessions"				
Column	Type	Collation	Nullable	Default
-----+-----+-----+-----+-----				
id	uuid		not null	
uuid_generate_v4()				
created_at	timestamp without time zone		not null	now()
updated_at	timestamp without time zone		not null	now()
start_time	time without time zone		not null	
end_time	time without time zone		not null	
date	date		not null	
session_id	character varying		not null	
session_chair_ids	text			
session_item_ids	text			
panal_discussion_ids	text			
plenary_talk_ids	text			
category	character varying		not null	
location	character varying			

Indexes:

"PK_3238ef96f18b355b671619111bc" PRIMARY KEY, btree (id)

"UQ_9340188c93349808f10d1db74a8" UNIQUE CONSTRAINT, btree (session_id)

Referenced by:

TABLE "session_chairs" CONSTRAINT "FK_14e57012eb4717bd686b8cbaa24" FOREIGN KEY (session_id) REFERENCES sessions(session_id) ON UPDATE CASCADE ON DELETE SET NULL

TABLE "plenary_talks" CONSTRAINT "FK_b06ba039733701745a59f162686" FOREIGN KEY (session_id) REFERENCES sessions(session_id) ON UPDATE CASCADE ON DELETE SET NULL

TABLE "panal_discussions" CONSTRAINT "FK_c1a69c2661806c2e1c6fc4c77cf" FOREIGN KEY (session_id) REFERENCES sessions(session_id) ON UPDATE CASCADE ON DELETE SET NULL

TABLE "session_items" CONSTRAINT "FK_fe6bd73f766fde90aa0854452b6" FOREIGN KEY (session_id) REFERENCES sessions(session_id) ON UPDATE CASCADE ON DELETE SET NULL

rescon=# \d session_items

Table "public.session_items"				
Column	Type	Collation	Nullable	Default
-----+-----+-----+-----+-----				
id	uuid		not null	
uuid_generate_v4()				

created_at	timestamp without time zone		not null	now()
updated_at	timestamp without time zone		not null	now()
start_time	time without time zone		not null	
end_time	time without time zone		not null	
title	character varying			
presenter_id	uuid			
session_id	character varying			
abstract_id	integer			
via	character varying			

Indexes:
"PK_93fe81b2d7f672603a7bf19382f" PRIMARY KEY, btree (id)
Foreign-key constraints:
"FK_adf2dab2d30bb46e4490a684182" FOREIGN KEY (presenter_id) REFERENCES users(id)
"FK_fe6bd73f766fde90aa0854452b6" FOREIGN KEY (session_id) REFERENCES sessions(session_id) ON UPDATE CASCADE ON DELETE SET NULL

```
rescon=# \d session_chairs
```

Table "public.session_chairs"				
Column	Type	Collation	Nullable	Default
session_id	character varying		not null	
session_chair_id	uuid		not null	

Indexes:
"PK_9fdb892f2352662c17305e9ea34" PRIMARY KEY, btree (session_id, session_chair_id)
"IDX_14e57012eb4717bd686b8cbaa2" btree (session_id)
"IDX_854f05eee1caae7decd9130d4d" btree (session_chair_id)
Foreign-key constraints:
"FK_14e57012eb4717bd686b8cbaa24" FOREIGN KEY (session_id) REFERENCES sessions(session_id) ON UPDATE CASCADE ON DELETE SET NULL
"FK_854f05eee1caae7decd9130d4d6" FOREIGN KEY (session_chair_id) REFERENCES users(id) ON UPDATE CASCADE ON DELETE SET NULL

```
rescon=# \d panal_discussions
```

Table "public.panal_discussions"				
Column	Type	Collation	Nullable	Default
-----+-----+-----+-----+-----				
id	uuid		not null	
uuid_generate_v4()				
created_at	timestamp without time zone		not null	now()
updated_at	timestamp without time zone		not null	now()
session_id	character varying			
start_time	time without time zone		not null	
end_time	time without time zone		not null	

Indexes:
"PK_0070f61d6c0250b79d657116298" PRIMARY KEY, btree (id)
Foreign-key constraints:

"FK_c1a69c2661806c2e1c6fc4c77cf" FOREIGN KEY (session_id) REFERENCES sessions(session_id) ON UPDATE CASCADE ON DELETE SET NULL

rescon=# \d plenary_talks

Table "public.plenary_talks"

Column	Type	Collation	Nullable	Default
id	uuid		not null	
uuid_generate_v4()				
created_at	timestamp without time zone		not null	now()
updated_at	timestamp without time zone		not null	now()
start_time	time without time zone		not null	
end_time	time without time zone		not null	
presenter	character varying		not null	
location	character varying		not null	
session_id	character varying			

Indexes:

"PK_628280c767ffe7c897d7576e110" PRIMARY KEY, btree (id)

Foreign-key constraints:

"FK_b06ba039733701745a59f162686" FOREIGN KEY (session_id) REFERENCES sessions(session_id) ON UPDATE CASCADE ON DELETE SET NULL