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Timetables for training camps

Home project

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Author's declaration of originality

I hereby certify that I am the sole author of this thesis. All the used materials, references to the literature and the work of others have been referred to. This thesis has not been presented for examination anywhere else.

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[dd.mm.yyyy]

Table of contents

Introduction

In recent years, the organization of camps has become increasingly popular among individuals seeking unique and enriching experiences. However, the manual coordination of participants and scheduling of activities can often be burdensome and time-consuming. To address this challenge, project aims to develop a system for automating timetables for training camps.

The primary objective of our project is to streamline the planning process for organizers by providing them with a user-friendly platform to input participant information and generate optimized activity schedules. By automating this process, we seek to enhance the efficiency and effectiveness of camp, ultimately leading to more enjoyable and fulfilling experiences for participants.

Overview

The aim is to automate the creation of training schedules, with a focus on tennis, beach tennis, and paddle tennis. Schedules can be generated based on the number of courts available, player preferences, and the number of coaches. Players are put into teams, teams can have up to 4 members. When generating new schedules, the program takes into account that players on the same team prefer to play on the same court. Players can specify the sport they want to play, their skill level, and their preferred time slots for playing. For example, some may prefer evenings over mornings. Each player has hours count to ensure they receive the full value of their payment. Coaches can also indicate the sports and skill levels they coach. The schedules are designed to ensure that there are not any overlapping game times for players participating in multiple sports. Convenient display of schedules for players and easy access to their own playing times are ensured.

Automating the scheduling process significantly reduces the time spent by organizers and minimizes errors. Players benefit from accurately generated schedules that are easily accessible. It becomes particularly time-consuming to create schedules when player preferences change, requiring manual adjustments to the tables.

The motivation behind this project is the prospect of offering the solution to acquaintances facing similar challenges, potentially charging for the service. Furthermore, there is a possibility to expand the system in the future, such as by adding tournament management capabilities.

UI

Player flow screens

User login/register

Login / Register

Username

Password

Creating a new user

New User

First Name
Last Name
Email
Age
Gender

Default role: player

Choosing a camp

Contest

ContestPackage

Creating a team

TeamName
☐ GameType
☐ Level

TimesAvailable
☐ Morning
☐ Lunch
☐ Evening

The organizer creates schedules

Viewing schedules

User Games

Game 1 ...
Game 2 ...
Game 3 ...
Game 4 ...

Organizer flow screens

Generate new timetables

Contest

Courts

Alates

1.Day
Times

Teachers

Teams

Kuni

2.Day
Times

3.Day
Times

(Generate)

Edit timetables

Court 1	Court 2	Court 3
Teacher	Teacher	Teacher
Players	Players	Players
Court 4	Court 5	Court 6
Teacher	Teacher	Teacher
Players	Players	Players
Court 7	Court 8	Court 9
Teacher	Teacher	Teacher
Players	Players	Players

(Done)

ERD Model

Contest

ContestName	Str(128)
Description	Str(256)
Games	Col
ContestTypeId	Guid
ContestType	Ref
TotalHours	Int
Alates	DT
Kuni	DT
ContestPackage	Col

ContestType

ContestTypeName	Str(128)
Description	Str(256)
Contests	Col

Time

Alates	DT
Kuni	DT
TimeOfDay	Guid
TimeOfDay	Ref

RolePreferences

LevelId	Guid
Level	Ref
GameTypeId	Guid
GameType	Ref
UserRoleId	Guid
UserRole	Ref

Court

CourtName	Str(128)
Games	Col
GameTypeId	Guid
GameType	Ref

Game

Title	Str(128)
Alates	DT
Kuni	DT
ContestId	Guid
Contest	Ref
CourtId	Guid
Court	Ref
GameTypeId	Guid
GameType	Ref
TimeOfDayId	Guid
TimeOfDay	Ref
LevelId	Guid
Level	Ref
TeamGames	Col

TimeOfDay

TimeOfDayName	Str(128)
Games	Col
Times	Col
TimeTeams	Col

PackageGameTypeTime

PackageGTName	Str(128)
GameTypeId	Guid
GameType	Ref
ContestPackageId	Guid
ContestPackage	Ref
Times	Decimal

Role

RoleName	Str(128)
UserRoles	Col

Level

Title	Str(128)
Description	Str(256)
Games	Col
RolePreferences	Col
Teams	Col

UserRole

UserId	Guid
User	Ref
RolePreferences	Col
RoleId	Guid
Role	Ref

GameType

GameTypeName	Str(128)
Courts	Col
Games	Col
Teams	Col
RolePreferences	Col

User

FirstName	Str(128)
LastName	Str(128)
Age	Int
Gender	EGender
UserContestPackages	Col
UserRoles	Col

UserContestPackage

UserId	Guid
User	Ref
ContestPackageId	Guid
ContestPackage	Ref
UserTeams	Col
HoursAvailable	Decimal

UserTeam

UserContestPackageId	Guid
UserContestPackage	Ref
TeamId	Guid
Team	Ref

Team

TeamName	Str(128)
LevelId	Guid
Level	Ref
GameTypeId	Guid
GameType	Ref
UserTeams	Col
TeamGames	Col
TimeTeams	Col

TeamGame

TeamId	Guid
Team	Ref
GameId	Guid
Game	Ref

TimeTeam

TeamId	Guid
Team	Ref
TimeOfDayId	Guid
TimeOfDay	Ref

ContestPackage

PackageName	Str(128)
ContestId	Guid
Contest	Ref
UserContestPackages	Col
PackageGameTypeTimes	Col