Logo, company name

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[1st SEMESTER From April to May]

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Problem Solving

Diploma in Information Technology

Project report.

The purpose of this application is to maintain a centralized database of swimmers’ timing from Singapore Swimming Association (SSA). Currently, the coaches are recording and submitting the swimmers’ timings manually using the paper. Thus, I design a mini application that will help to auto mate recording and submitting process. The overall view of the program is it will acquire user input for registration process and registered users can submit their swimmers’ record as many as they want, and these records will be posted or remain unposted based on user’s decision.

First of all, I decided to create a raw form of program first which can eventually be developed into a fully functional version which can interact with user can store users’ information in a real database. I used an offline database called pickle which is built in python module and can also be considered as mockup database. That can store data in a text file, and we can draw them out in anytime and can mutate them in our favor. For registration process, we acquire three user inputs, user’s name, gender, and date of birth. The reason we use date of birth instead of age is we will calculate the age based on the date and it is apparently more reliable and standardized. Next thing is I put the user’s status as active which is default value for newly registered user. The following step is to delete registered users. In order to delete user, we must check if the user does exist in our database in the first place. If the user does exist and its status is active, I updated the status to inactive. We can active the user again through the registration for new user process. I put a condition that if the user’s name is already existed in our database and status is active, we inform the user that he or she is already in the database and status is also active. After user registered in our program, he now can record his swimmer’s timing. In this step, the program will acquire inputs such as name, event type, timing and meet or competition location. One user can record more than one swim timing and initially the program will ask him or her that he or she wants to post their timing on the database.

For the final step, I implemented a function that users can search back their records by name or name and event type, and they can either post or unposted these filter results. I also implemented validations functions to improve user experience even though not as much precise as I expect it to be. If I had more time, I could have designed a graphical structure and real database which will be much more promising than this version of the application. With more time, I could bring this application to be launched in the real world. You could check out the flowchart of the program down below.

A picture containing arrow

Description automatically generatedFlowchart

Noted: I also added the PNG file for the flowchart in the project folder in which you can have a better view of the program.

User’s manual guide

Graphical user interface, text, application

Description automatically generatedThis is how it will look like once you run the application.

Shape

Description automatically generated with low confidenceEnter one for registration.

In this you can either create, delete or record swimmer’s timings.

Graphical user interface

Description automatically generatedFirst create a user

You can now either end the reistration process or continue.

Shape

Description automatically generated with low confidenceIn this case I will continue. Which will bring back to second photo.

Now, let’s delete user.

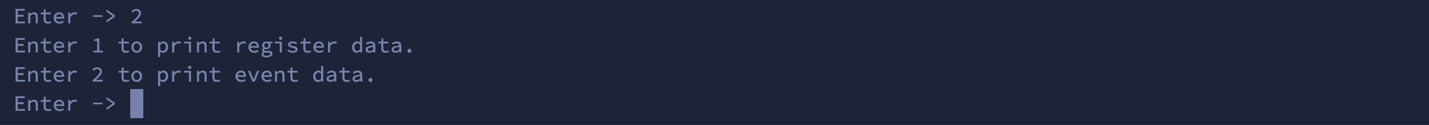
Graphical user interface, text

Description automatically generatedEnter 2 to delete user and it will ask your name. You can enter the name you want to delete. For now, let’s try delete a user. I created users in advance for testing. So, enter Kyaw Za Yan Naing.

Text

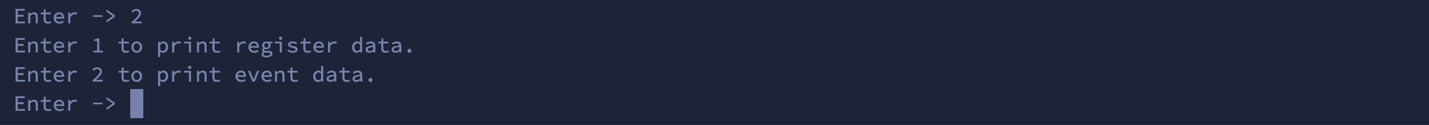
Description automatically generatedAs we can see, user’s status is now updated to inactive. Let’s move to next step, which step is to record swimmer timing for the user we created. So, enter “no” to keep the register process and enter 3 to record swimmers timing. Enter the input that program ask you.

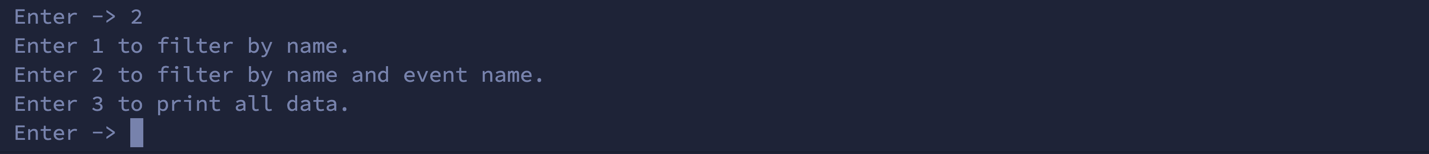
Let’s now move on to data display process. Thus, enter yes to end the registration process. It will again ask you do you want to end the program. Enter “no” to continue the program.

After that, I will lead you back to the first photo in which program ask you that do you want to register or print data. To print data, enter 2.

Graphical user interface

Description automatically generated with medium confidenceNow, program will ask you that do you want to print register data or print the recorded even data. Firstly, let’s see what is inside the register. To see that, enter 1.

We can see the user Jayden Core we register earlier along with the information we put, and status is active. Nonetheless we can see the user Kyaw Za Yan Naing that we deleted, and his status is inactive. Let’s continue the printing process. In order to do that, enter “no” for now.

Let’s move on to the event data. Enter 2 for that.

A picture containing text

Description automatically generatedNow, we can see three options. We can search by name, name and event name and just print all data inside the database. Let’s see all the data first. Enter 3 for that.

Graphical user interface

Description automatically generatedThere are all the data I have added for testing, and we can see the data Jayden Core information and it is unposted because we chose not to post. Now, let’s try search method. For that, enter “no” to continue printing process. Enter 2 to print event data and enter 1 to filter by name. Let’s try with name Kyaw Za Yan Naing.

We can see two records that are unposted listed, and that program ask you that you want to post or not. I entered “Yes” so the program posted those events and return back the data along with a message. Enter “no” again to test filter by name and event name function. Enter 2 to print event data and enter 2 again to test that function.

Graphical user interface

Description automatically generated with medium confidenceAs shown in the picture above, I searched with the name Mg Mg and event name 1500 Freestyle. There are two data with different timing and location. I entered yes to post all two of them. Unfortunately, it’s pretty much all about the program. You can try doing other options and test as many as you want to. To quit the program, enter yes to end printing process and yes again to end the program.