SWIMMING INFORMATION DATABASE

Blaise Swartwood, Brian Beasley, Ben Graham

CSSE333 Database Systems

5/10/2023

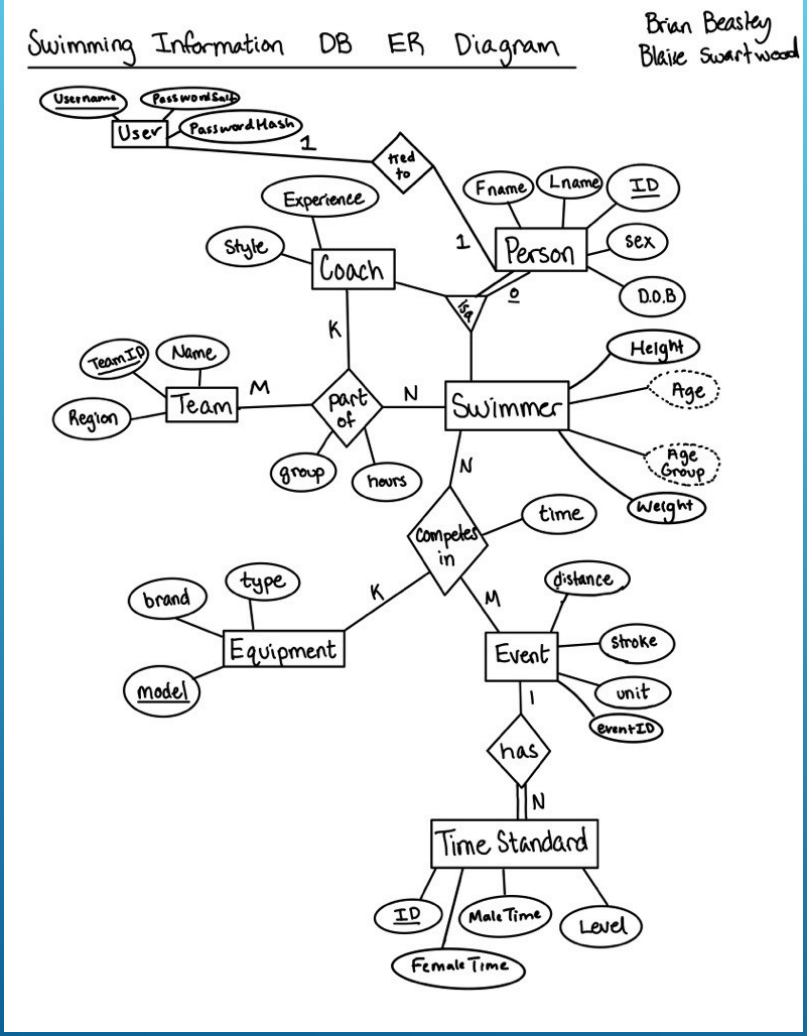
THE PROBLEM

2023 NCAA DIVISION III SWIMMING AND DIVING CHAMPIONSHIPS – MEN'S CUTS

EVENT	A STANDARD	B STANDARD
50 Free	19.46*	20.51*
100 Free	43.31	45.11*
200 Free	1:36.74	1:39.80*
500 Free	4:20.26	4:32.31*
1650 Free	15:02.59	16:16.65
100 Back	46.91*	49.68*
200 Back	1:43.63*	1:49.86
100 Breast	52.11	55.78*
200 Breast	1:53.85	2:02.30*
100 Fly	47.19	49.02*
200 Fly	1:45.31*	1:50.85
200 IM	1:45.47	1:51.45
400 IM	3:47.19	4:01.49

THE PROBLEM

- No easy way for swimmers to compare all their best swim times to a certain time standard
- No data collection on current suits used by swimmers to aid in the buying process



OUR SOLUTION

- Person
  - Swimmer
  - Coach
- User
- Event
- Equipment
- Team
- Time Standard

Targeted to small swimming communities such as the one in Terre Haute

CHALLENGES

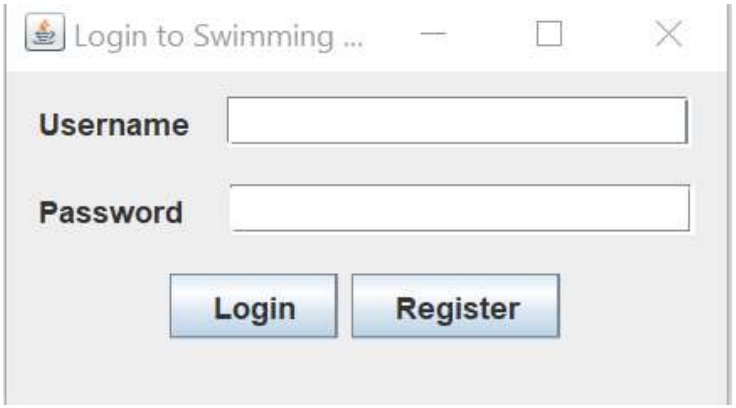
CHALLENGES

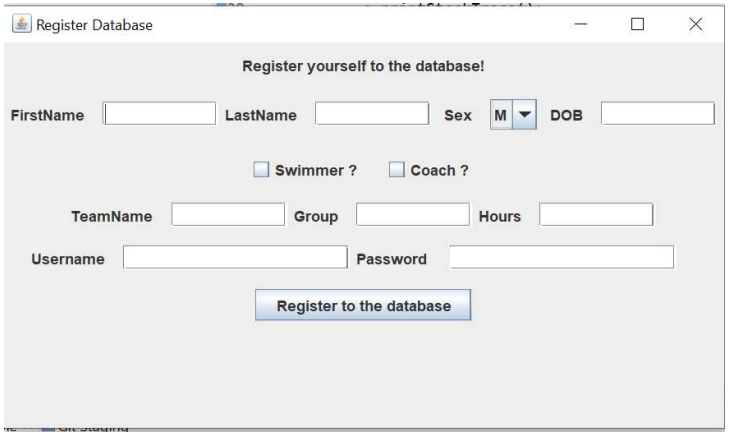
- Time data type
- User/registration
- Admin vs user
- GIT

SOLUTIONS

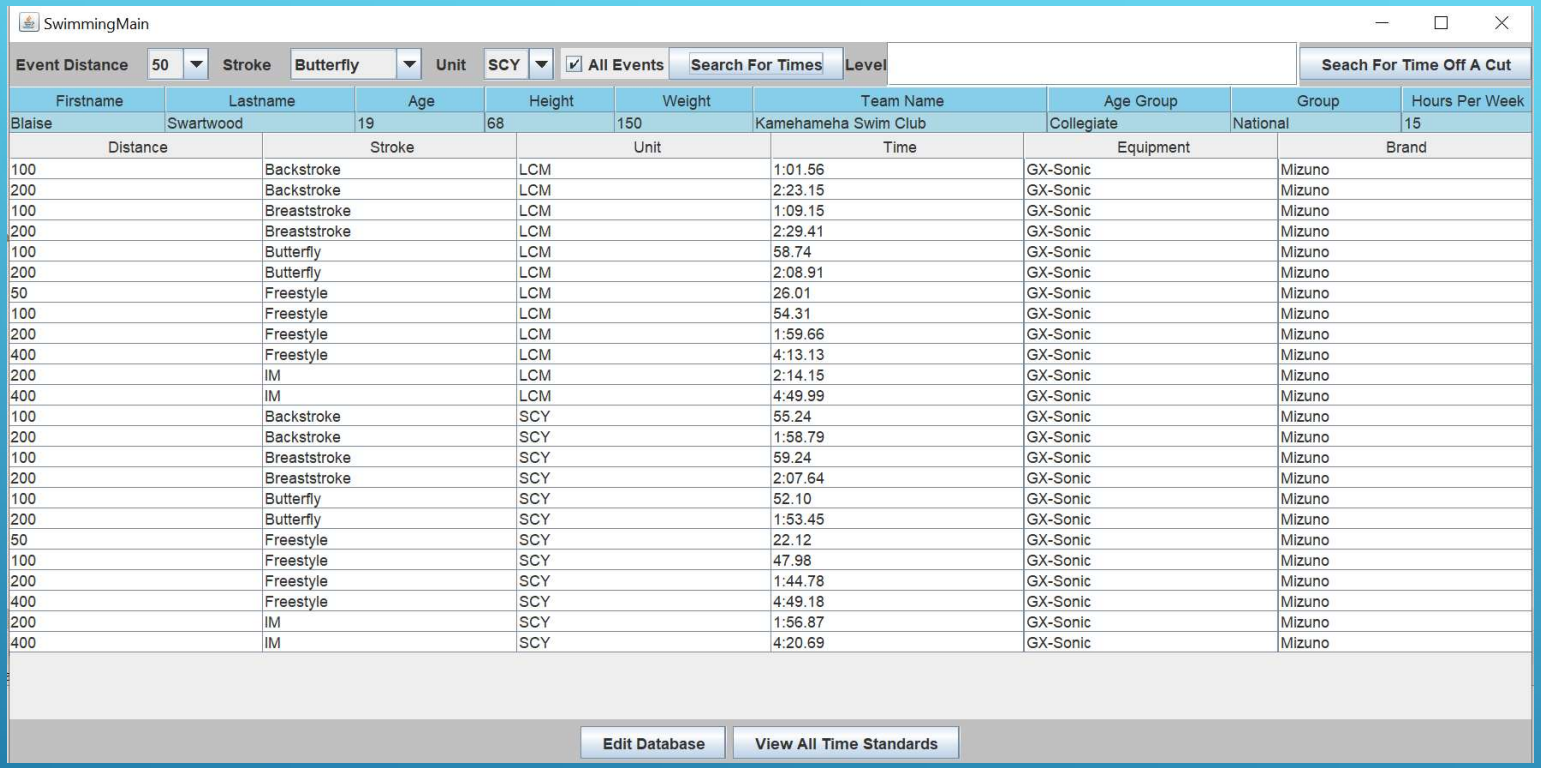
- Stored in seconds, parsed to look like a time
- Added a username attribute to person, changed how menu appear
- Hid visibility and certain field texts based on being admin or not
- Got better – resolved skill issue

FUNCTIONALITY



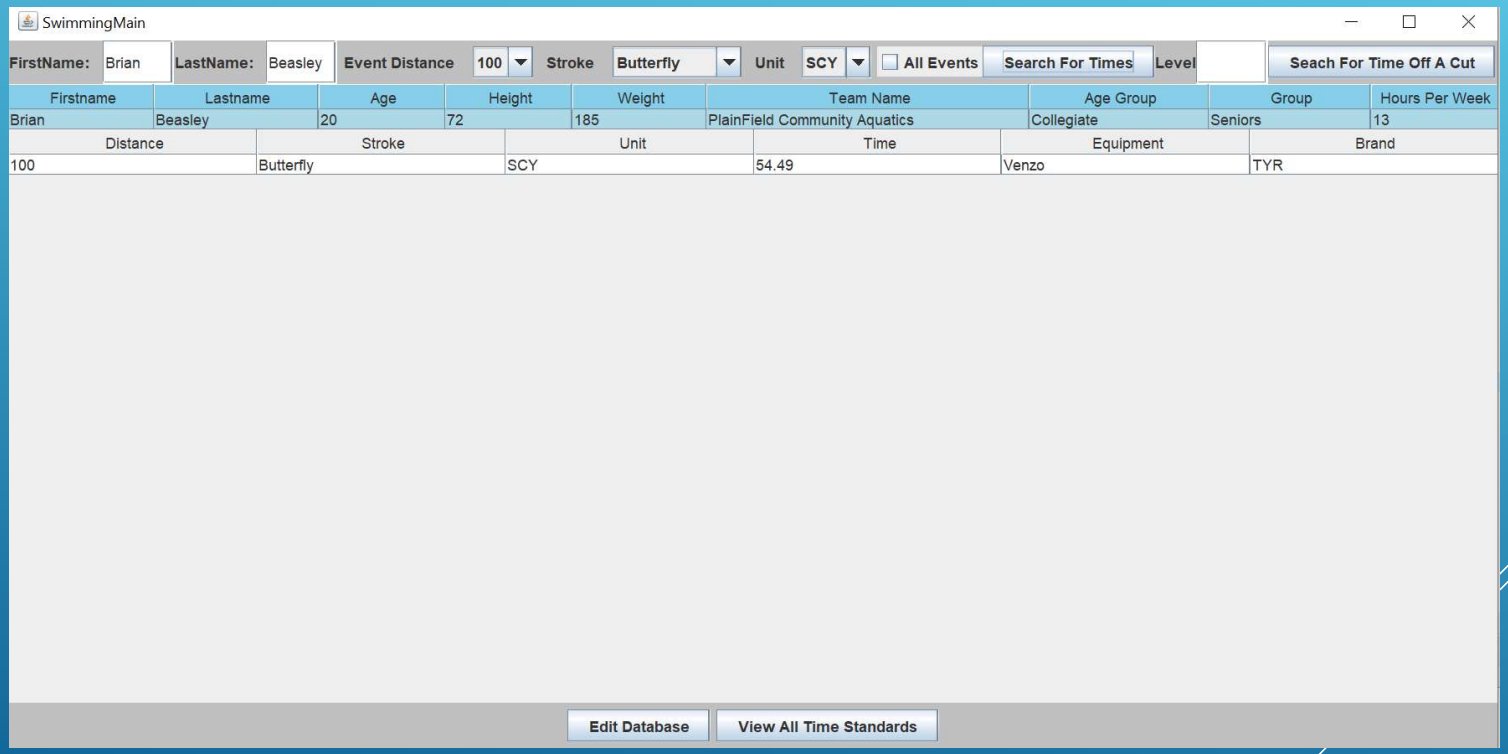


LOGIN & REGISTER

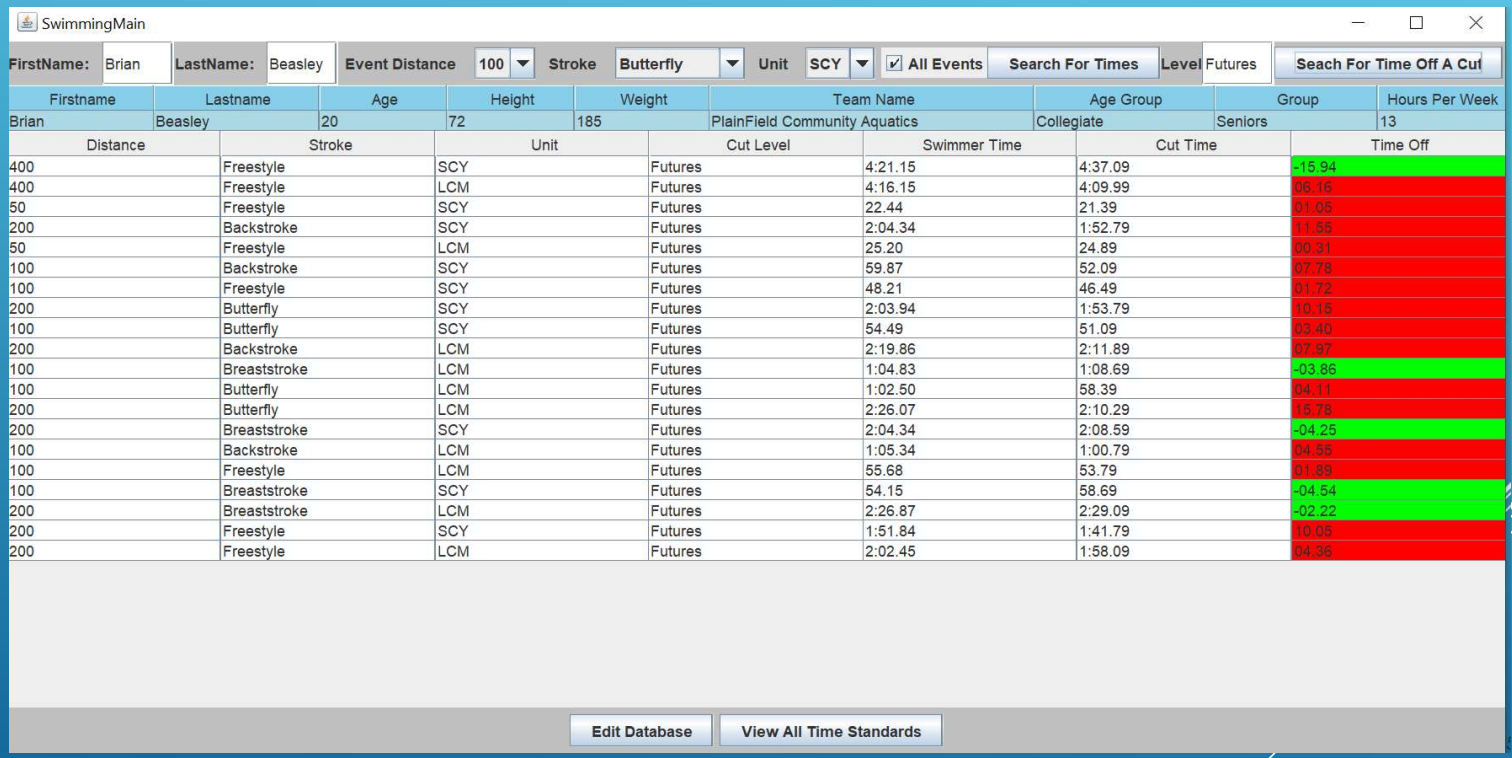


SEARCHING - USER

SEARCHING - ADMIN



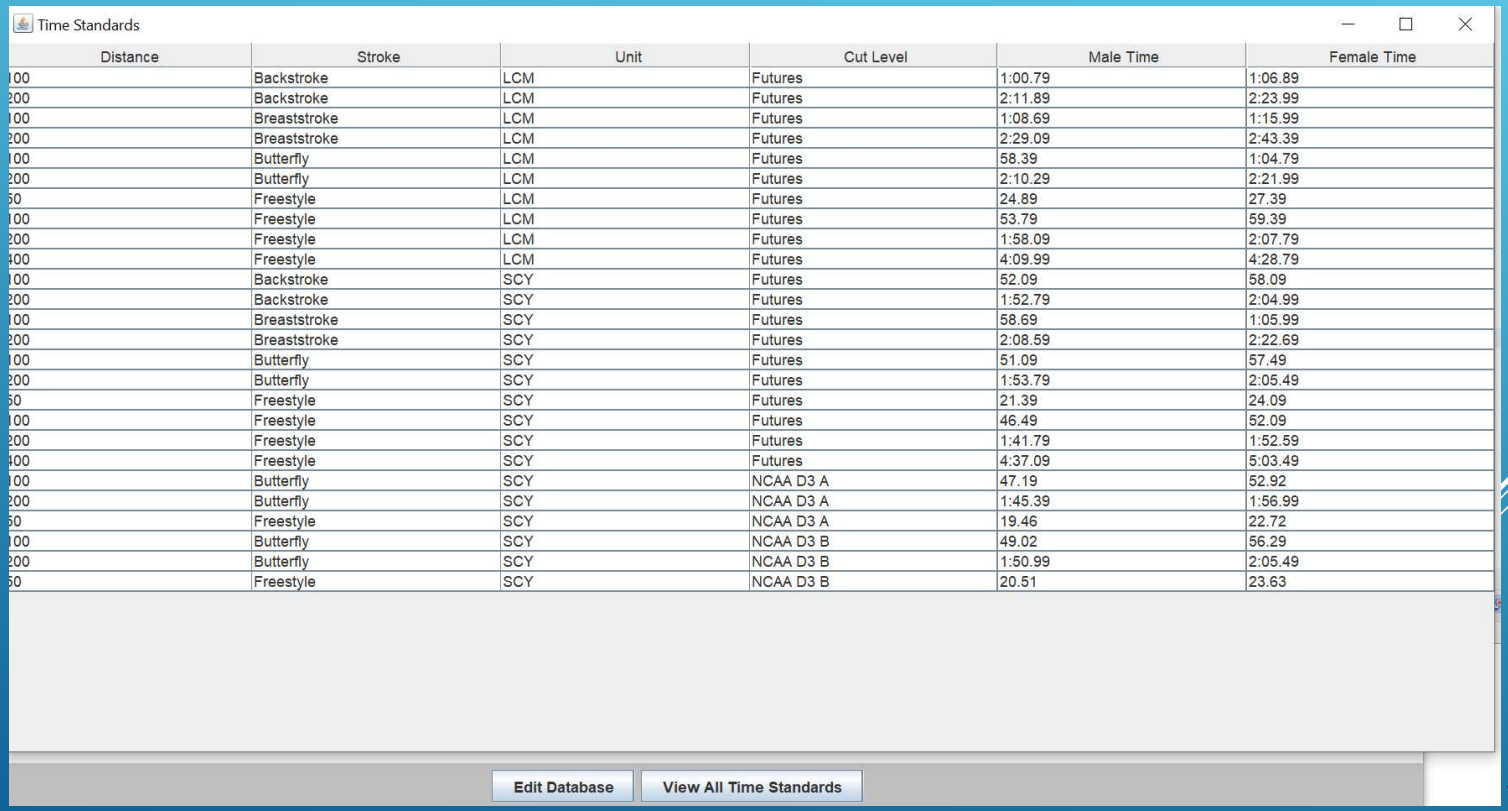
SEARCHING – TIME OFF FEATURE



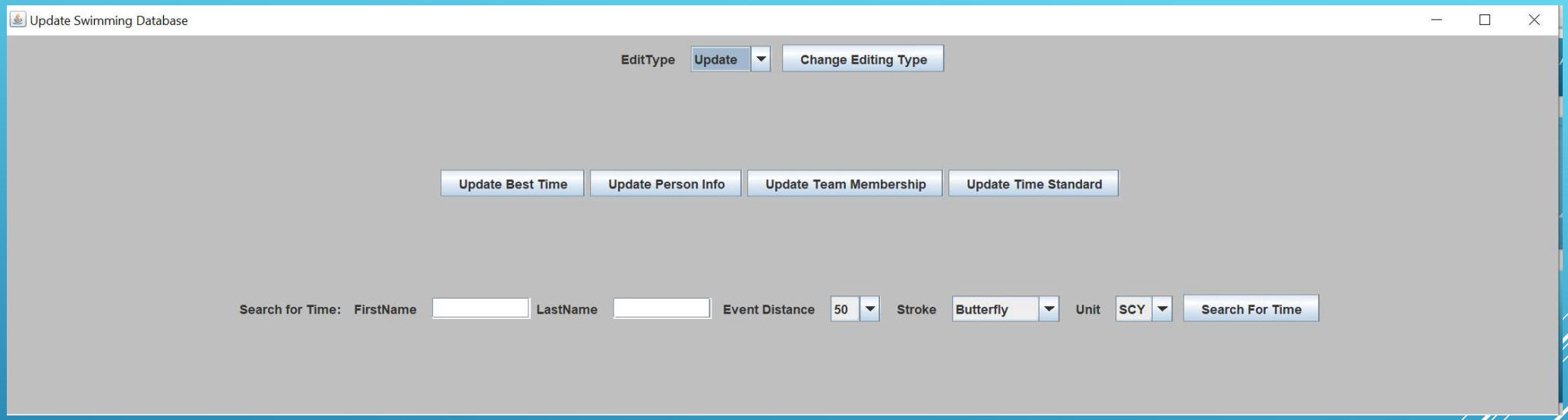
Firstname	Lastname	Age	Height	Weight	Team Name	Age Group	Group	Hours Per Week
Brian	Beasley	20	72	185	PlainField Community Aquatics	Collegiate	Seniors	13

Distance	Stroke	Unit	Cut Level	Swimmer Time	Cut Time	Time Off
400	Freestyle	SCY	Futures	4:21.15	4:37.09	-15.94
400	Freestyle	LCM	Futures	4:16.15	4:09.99	06.16
50	Freestyle	SCY	Futures	22.44	21.39	01.05
200	Backstroke	SCY	Futures	2:04.34	1:52.79	11.55
50	Freestyle	LCM	Futures	25.20	24.89	00.31
100	Backstroke	SCY	Futures	59.87	52.09	07.78
100	Freestyle	SCY	Futures	48.21	46.49	01.72
200	Butterfly	SCY	Futures	2:03.94	1:53.79	10.15
100	Butterfly	SCY	Futures	54.49	51.09	03.40
200	Backstroke	LCM	Futures	2:19.86	2:11.89	07.97
100	Breaststroke	LCM	Futures	1:04.83	1:08.69	-03.86
100	Butterfly	LCM	Futures	1:02.50	58.39	04.11
200	Butterfly	LCM	Futures	2:26.07	2:10.29	15.78
200	Breaststroke	SCY	Futures	2:04.34	2:08.59	-04.25
100	Backstroke	LCM	Futures	1:05.34	1:00.79	04.55
100	Freestyle	LCM	Futures	55.68	53.79	01.89
100	Breaststroke	SCY	Futures	54.15	58.69	-04.54
200	Breaststroke	LCM	Futures	2:26.87	2:29.09	-02.22
200	Freestyle	SCY	Futures	1:51.84	1:41.79	10.05
200	Freestyle	LCM	Futures	2:02.45	1:58.09	04.36

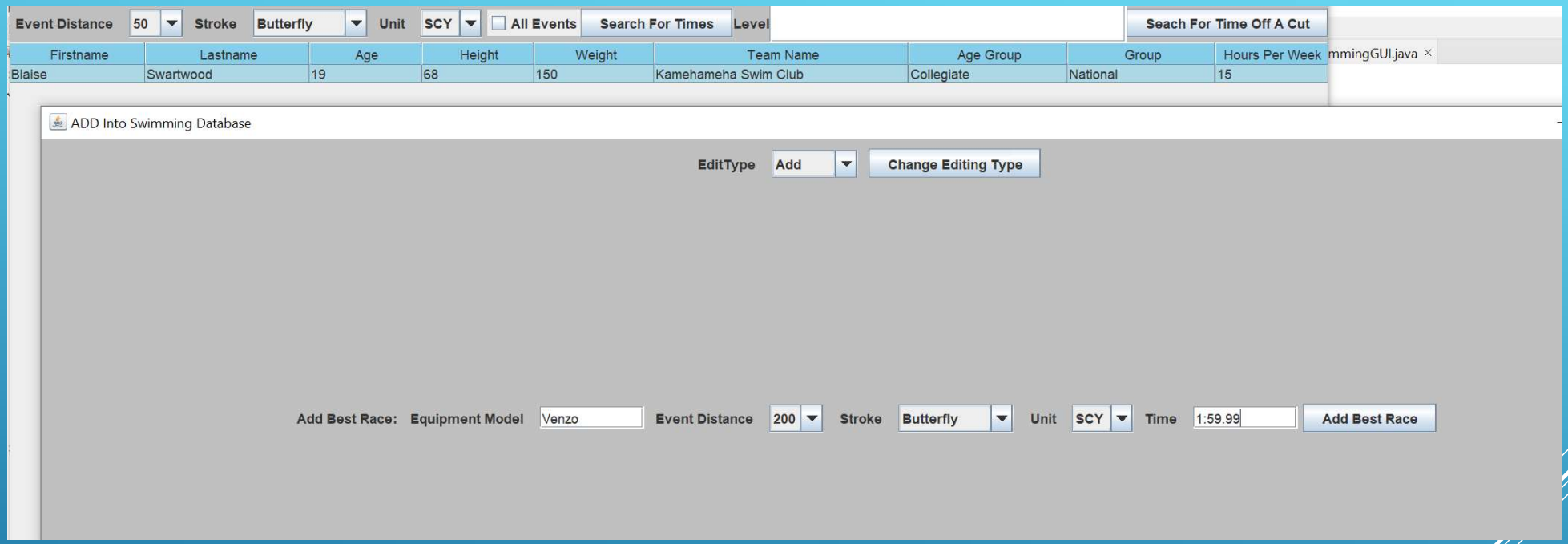
TIME STANDARD



Distance	Stroke	Unit	Cut Level	Male Time	Female Time
100	Backstroke	LCM	Futures	1:00.79	1:06.89
200	Backstroke	LCM	Futures	2:11.89	2:23.99
100	Breaststroke	LCM	Futures	1:08.69	1:15.99
200	Breaststroke	LCM	Futures	2:29.09	2:43.39
100	Butterfly	LCM	Futures	58.39	1:04.79
200	Butterfly	LCM	Futures	2:10.29	2:21.99
50	Freestyle	LCM	Futures	24.89	27.39
100	Freestyle	LCM	Futures	53.79	59.39
200	Freestyle	LCM	Futures	1:58.09	2:07.79
400	Freestyle	LCM	Futures	4:09.99	4:28.79
100	Backstroke	SCY	Futures	52.09	58.09
200	Backstroke	SCY	Futures	1:52.79	2:04.99
100	Breaststroke	SCY	Futures	58.69	1:05.99
200	Breaststroke	SCY	Futures	2:08.59	2:22.69
100	Butterfly	SCY	Futures	51.09	57.49
200	Butterfly	SCY	Futures	1:53.79	2:05.49
50	Freestyle	SCY	Futures	21.39	24.09
100	Freestyle	SCY	Futures	46.49	52.09
200	Freestyle	SCY	Futures	1:41.79	1:52.59
400	Freestyle	SCY	Futures	4:37.09	5:03.49
100	Butterfly	SCY	NCAA D3 A	47.19	52.92
200	Butterfly	SCY	NCAA D3 A	1:45.39	1:56.99
50	Freestyle	SCY	NCAA D3 A	19.46	22.72
100	Butterfly	SCY	NCAA D3 B	49.02	56.29
200	Butterfly	SCY	NCAA D3 B	1:50.99	2:05.49
50	Freestyle	SCY	NCAA D3 B	20.51	23.63



EDIT PAGE – ADMIN UPDATE



EDIT PAGE – USER ADD

BACK-END

- Lots of Create, Remove, Update, Delete stored procedures
- Index on first name + last name -> common for searching
- Trigger to catch duplicate people
- Multi-valued table function for searching times and gathering swimmer/coach info
- View for time standard

THANK YOU FOR LISTENING! QUESTIONS?