TOURNAMENTMANAGEMENT SYSTEM

A mini project report submitted in partial fulfilment
of the requirements for the award of
the completion of Second year, 1st semester of
BACHELOR OF ENGINEERING
IN
INFORMATION TECHNOLOGY by

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Chaitanya Bharathi Institute of Technology
DEPARTMENT OF INFORMATION TECHNOLOGY

CERTIFICATE

This is to certify that the project work entitled 'Tournament Management System' submitted to CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY, in partial fulfillment of the requirements for the award of the completion of Second year 1st semester of B.E in information technology, during the academic year 2016, is a record of original work done by Bhavitha M (160115737008) and Jyothsna M (160115737014) during the period of study in the Dept. of IT,CBIT, HYDERABAD, under our supervision and guid-
ance.

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DECLARATION

This is to declare that the work reported in the present mini project entitled TOURNAMENT MANAGEMENT SYSTEM is a record of work done by us in the Department of Information Technology, Chaitanya Bharathi Institute of Technology, Autonomous. The reports are based on the project work done entirely by us and not copied from any other source.

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ABSTRACT

Pairing teams in a tournament can be done manually, but there is a scope for malpractices like being supportive to one particular team throughout the game and pairing their supportive team with a weak team so that they can win. In order to avoid such situations this project aims at computerized pairing which allows the user to choose the type of tournament: Round-Robin (Every team has to play with all other teams) and Knock out tournament(random pairing in the first round and score based pairing for all the remaining rounds) and displays the winner of the tournament. Users (coach) can notifiy the students about the tournament schedule through e-mails. This website includes cric buzz which displays live scores. It also provides past winning records.

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Chapter 1

Introduction

1.1 Overview

A tournament is a competition involving a relatively large number of competitors, all participating in a sport or game. More specifically, the term may be used in either of two overlapping senses:

1. One or more competitions held at a single venue and concentrated into a relatively shorttime interval.
2. A competition involving multiple matches, each involving a subset of the competitors,with the overall tournament winner determined based on the combined results of these individual matches. These are common in those sports and games where each match must involve a small number of competitors: often precisely two, as in most team sports, racket sports and combat sports, many card games and board games, and many forms of competitive debating. Such tournaments allow large numbers to compete against each other in spite of the restriction on numbers in a single match.

Management

Every tournament director and referee is familiar with the long hours and stacks of paperwork needed to run a successful tennis tournament. The Tournament Management System (TMS) reduces the time spent on administrative tasks by simplifying all phases of tournament management. At the same time, TMS adds professional touches to a tournament that no one can do without.

The excellence of the TMS product line is reflected in the fact that over a two thousand sites use TMS and the USTA has purchased a nationwide license. An absolute and unique focus on the needs of both tournament directors and referees has kept TMS at the forefront of tournament management software for over a decade.

Easy to Use

Entering player information and match results into the system is simple, straightforward, and fast. TMS wizards allow directors to perform tasks quickly and painlessly by answering a few questions. At the touch of a button you can schedule matches, print draw sheets, switch between multiple events, and access draws.

Incredible Functionality

TMS uses a single player database for all tournaments to reduce data entry time and simplify check-in procedures for players. Handles all draw types from complex tournaments with consolation draws to recreational tournaments with change-partner round robins. Generates draws and schedules matches according to the latest rules and regulations. Prints beautiful color draw sheets. Easily produces reports that are otherwise difficult to generate:
first match times, check-in lists, fees owed, and press releases.
The Internet
TMS also enables directors to make tournament information publicly available to players, parents, newspapers, and tennis enthusiasts 24 hours a day. TMS can automatically publish drawsheets to www.TennisInformation.com so that anyone can track match results from anywhere using a home computer. Additionally, TMS makes it simple for tournament directors to verify USTA numbers.

1.2 Organisation of the report

The organization of report is as follows:
Chapter 1 deals with the introduction of the project and gives the details about the project in an abstract view.
Chapter 2 deals with the software and hardware requirements for the project.
Chapter 3 deals with the techniques to be used by the player to solve the given puzzle.
Chapter 4 deals with the entire methodology of how we developed this project and implementation.
Chapter 5 shows the results i.e screenshots of our outputs.
Chapter 6 explains the conclusion and future scope of the project.

Chapter 2

Software and Hardware Requirements

Software and hardware requirements - Operating system - windows XP

Programming languages - HTML ,CSS ,JAVASCRIPT ,PHP ,PYTHON

Software - Xampp

Chapter 3

Techniques

3.1 Round-Robin Tournament

A round-robin tournament (or all-play-all tournament) is a competition ”in which each contestant meets all other contestants in turn”.It contrasts with an elimination tournament. In a single round-robin schedule, each participant plays every other participant once. If each participant plays all others twice, this is frequently called a double round-robin. The term is rarely used when all participants play one another more than twice, and is never used when one participant plays others an unequal number of times (as is the case in almost all of the major United States professional sports leagues In the United Kingdom, a roundrobin tournament is often called an American tournament in sports such as tennis or billiards which usually have knockout tournaments. In Italian it is called girone all’italiana (literally ”Italian-style circuit”). In Serbian it is called the Berger system (, Bergerov sistem), after chess player Johann Berger. A round-robin tournament with four players is sometimes called ”quad” or ”foursome”.

Round-Robin scheduling

To schedule processes fairly, a round-robin scheduler generally employs time-sharing, giving each job a time slot or quantum[4] (its allowance of CPU time), and interrupting the job if it is not completed by then. The job is resumed next time a time slot is assigned to that process. If the process terminates or changes its state to waiting during its attributed time quantum, the scheduler selects the first process in the ready queue to execute. In the absence of time-sharing, or if the quanta were large relative to the sizes of the jobs, a process that produced large jobs would be favoured over other processes.

Round-robin algorithm is a pre-emptive algorithm as the scheduler forces the process out of the CPU once the time quota expires.

For example, if the time slot is 100 milliseconds, and job1 takes a total time of 250 ms to complete, the round-robin scheduler will suspend the job after 100 ms and give other jobs their time on the CPU. Once the other jobs have had their equal share (100 ms each), job1 will get another allocation of CPU time and the cycle will repeat. This process continues until the job finishes and needs no more time on the CPU.

Job1 = Total time to complete 250 ms (quantum 100 ms).

1. First allocation = 100 ms.
2. Second allocation = 100 ms.
3. 3.Third allocation = 100 ms but job1 self-terminates after 50 ms.
4. Total CPU time of job1 = 250 ms
5. Consider the following table with the arrival time and execute time of the process withthe quantum time of 100ms to understand the round-robin scheduling:

Process name Arrival time Execute time

P0 0 250

P1 50 170

P2 130 75

P3 190 100

P4 210 130

P5 350 50

Evaluation

In theory, a round-robin tournament is the fairest way to determine the champion among a known and fixed number of participants. Each participant, player or team, has equal chances against all other opposites. The element of luck is seen to be reduced as compared to a knockout system since bad performances need not cripple a competitor's chance of ultimate victory. Final records of participants are, thus, seen to be more accurate as they represent the results over a longer period against equal competition. This can also be used to determine which teams are the poorest performers and thus subject to relegation if the format is used in a multi-tiered league. This is also helpful to determine the final rank of all competitors from strongest to weakest for purposes of qualification for another stage or competition as well as for prize money. In team sport the (round-robin) major league champions is generally regarded as the "best" team in the land, rather than the (elimination) cup winners.

Moreover, in tournaments such as the FIFA or ICC world cups, a first round stage consisting of a number of mini round robins between groups of 4 teams guards against the possibility of a team travelling possibly thousands of miles only to be eliminated after just one poor performance in a straight knockout system. The top one, two, or occasionally three teams in these groups then proceed to a straight knockout stage for the remainder of the tournament.

The main disadvantage of a round robin tournament is the time needed to complete it. Unlike a knockout tournament where half of the participants are eliminated after each

round, a round robin requires one round less than the number of participants if the number of participants is even, and as many rounds as participants if the number of participants is odd. For instance, a tournament of 16 teams can be completed in just 4 rounds (i.e. 15 matches) in a knockout format; a round-robin would require 15 rounds (i.e. 120 matches) to finish. Other issues stem from the difference between the theoretical fairness of the round robin format and practice in a real event. Since the victor is gradually arrived at through multiple rounds of play, teams who perform poorly can be eliminated from title contention rather early on, yet they are forced to play out their remaining games. Thus games occur late in competition between competitors with no remaining chance of success. Moreover, some later matches will pair one competitor who has something left to play for against another who does not. It may also be possible for a competitor to play the strongest opponents in a round robin in quick succession while others play them intermittently with weaker opposition. This asymmetry means that playing the same opponents is not necessarily equitable: the same opponents in a different order may play harder or easier matches while other teams are presented with more adversity during periods of the competition. There is also no scheduled showcase final match. Only by coincidence would two competitors meet in the final match of the tournament where the result of that match determined the championship..

Further issues arise where a round-robin is used as a qualifying round within a larger tournament. A competitor already qualified for the next stage before its last game may either not try hard (in order to conserve resources for the next phase) or even deliberately lose (if the scheduled next-phase opponent for a lower-placed qualifier is perceived to be easier than for a higher-placed one). Four pairs in the 2012 Olympics Women's doubles badmintonhaving qualified for the next round, were disqualified for attempting to lose in the round robin stage to avoid compatriots and better ranked opponents.[9] The round robin stage at the Olympics were a new introduction and potential problems were readily known prior to the tournament.

Swiss system tournaments attempt to combine elements of the round-robin and elimination formats, to provide a reliable champion using fewer rounds than a round-robin, while allowing draws and losses

3.2 Knockout Tournaments

A knockout tournament or elimination tournament is divided into successive rounds; each competitor plays in at least one fixture per round. The top-ranked competitors in each fixture progress to the next round. As rounds progress, the number of competitors and fixtures decreases. The final round, usually known as the final or cup final, consists of just one fixture; the winner of which is the overall champion. In a single-elimination tournament, only the top-ranked competitors in a fixture progress; in 2-competitor games, only the winner progresses. All other competitors are eliminated. This ensures a winner is decided with the minimum number of fixtures. However, most competitors will be eliminated after relatively few matches; a single bad or unlucky performance can nullify many preceding excellent ones. A double-elimination tournament may be used in 2-competitor games to allow each competitor a single loss without being eliminated from the tournament. All losers from the main bracket enter a losers' bracket, the winner of which plays off against the main bracket's winner.

Some formats use a repechage, allowing losers to play extra rounds before re-entering the main competition in a later round. Rowingregattas often have repechage rounds for the "fastest losers" from the heats. The winners of these progress, but are at a disadvantage in later rounds owing to the extra effort expended during the repechage.

A family of tournament systems that grew from a system devised for the Victorian Football League, the historic predecessor to the Australian Football League (AFL), allow the teams with the best record before the playoffs to lose a game without being eliminated, whereas lesser qualifiers are not. Several of the most prominent leagues in Australia use such a system, such as the AFL and the National Rugby League in rugby league. The ALeague of association football also used such a system through its 201112 season, but now uses a pure knockout playoff. Similar systems are used in cricket's Indian Premier League and most curling tournaments, and were also used by the Super League of European rugby league before being scrapped after the 2014 season.

In athletics meetings, fastest losers may progress in a running event held over several rounds; e.g. the qualifiers for a later round might be the first 4 from each of 6 heats, plus the 8 fastest losers from among the remaining runners.

An extreme form of the knockout tournament is the stepladder format where the strongest team (or individual, depending on the sport) is assured of a berth at the final round while

the next strongest teams are given byes according to their strength/seeds; for example, in a four team tournament, the fourth and third seed figure in the first round, then the winner goes to the semifinals against the second seed, while the survivor faces the first seed at the final. Four American sports organizations either currently use this format, or have in the past:

Since the mid-1960s, most ten-pin bowling events use a stepladder final, usually involving five bowlers.

Two U.S. college conferences operate a tournament format in basketball that combines two stepladder tournaments into onethat is, both halves of the bracket are organized as stepladder tournaments. The bottom four teams play in the first round; the survivors will face the 3 and 4 seeds, and the winners of those matches take on the top two seeds in the semifinals. This format was adopted by the West Coast Conference for its men's and women's tournaments in 2003, and by the Ohio Valley Conference for both sexes in 2011. Once the WCC expanded to nine teams with the entry of BYU in the 201112 academic year, the conference added one round to one half of the bracket for both tournaments starting in 2012. The now-defunct Women's Professional Soccer used this format in all of its three seasons of existence. For an example of its playoff system, see 2009 Women's Professional Soccer Playoffs

3.3 Web Scrapping

Web scraping (web harvesting or web data extraction) is data scraping used for extracting data from websites. Web scraping software may access the World Wide Web directly using the Hypertext Transfer Protocol, or through a web browser. While web scraping can be done manually by a software user, the term typically refers to automated processes implemented using a bot or web crawler. It is a form of copying, in which specific data is gathered and copied from the web, typically into a central local database or spreadsheet, for later retrieval or analysis. Web scraping a web page involves fetching it and extracting from it. Fetching is the downloading of a page (which a browser does when you view the page). Therefore, web crawling is a main component of web scraping, to fetch pages for later processing. Once fetched, then extraction can take place. The content of a page may be parsed, searched, reformatted, its data copied into a spreadsheet, and so on. Web scrapers typically take something out of a page, to make use of it for another purpose somewhere else. An example would be to find and copy names and phone numbers, or companies and their URLs, to a list (contact scraping).

Web scraping is used for contact scraping, and as a component of applications used for web indexing, data mining, online price change monitoring and price comparison, product review scraping (to watch the competition), gathering real estate listings, weather data monitoring, website change detection, research, tracking online presence and reputation, web mashup and, web data integration.

Web scraping in python using Beautiful soup:

Beautiful Soup Features:

Beautiful Soup provides a few simple methods and Pythonic idioms for navigating, searching, and modifying a parse tree: a toolkit for dissecting a document and extracting what you need. It doesn't take much code to write an application.

Beautiful Soup automatically converts incoming documents to Unicode and outgoing documents to UTF-8. You don't have to think about encodings, unless the document doesn't specify an encoding and Beautiful Soup can't autodetect one.

Then you just have to specify the original encoding.

Beautiful Soup sits on top of popular Python parsers like lxml and html5lib, allowing you to try out different parsing strategies or trade speed for flexibility.

3.4 Sending notifications through E-mail (localhost)

The students or participants are notified through the e-mails. Information regarding the tournaments being held in the college , result of the matches, schedule of the matches and fixtures is intimated to the students.

Chapter 4

Implementation and Methodology

Various implementation details and methodology for this project:

4.1 Flowchart

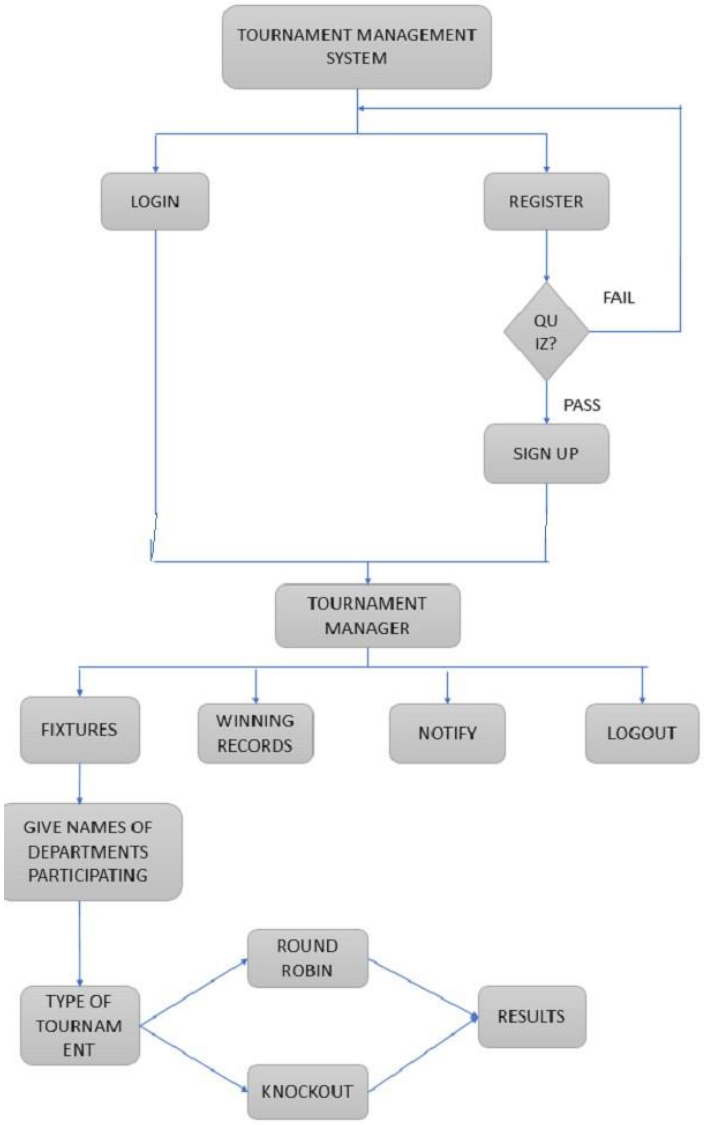


Figure 4.1: Flowchart

4.2 Round-Robin Algorithm

```
function roundRobin ( array $teams )

{\\checking the conditions

    if ( count ( $teams)%2 != 0){ array_push (
        $teams ," bye " ) ;
    }
    $away = array_splice ( $teams , ( count ( $teams ) / 2 ) ) ; $home =
    $teams ;
        /* print_r ( $home ) ; print_r ( $away ) ; */

        \\ entering the for loop

    for ( $i =0; $i < count ( $home)+ count ( $away)−1; $i ++)
    {
        for ( $j =0;$j<count ( $home ) ; $j ++)
        {
            $round [ $i ] [ $j ]["Home"]=$home [ $j ] ;
            $round [ $i ] [ $j ][" Away"]= $away [ $j ] ;
        } if ( count ( $home)+ count ( $away)−1 > 2)
        {
            $s = array_splice ( $home , 1 , 1 ) ; $slice = array_shift ( $s ) ; array_unshift ( $away , $slice ) ;
            array_push ( $home , array_pop ( $away ) ) ;
        }
    }
return $round ;
}
```

4.3 Knockout Algorithm

In this method ,we paired the first and last team ,then second and last but one team and so on with the help of following function:

```
$neww=array();

if(count($new2)%2!=0)
   {
            array_push($new2,'bye');
   }

   $c=count($new2);

for($r=0;$r<$c/2;$r++)
{
   if($points[$r]=='win1')
   {
            //echo "jyo";
            //echo $j;
            array_push($neww,$new2[$j]);
            $j++;
   }
   else
   {
            $j++;
            //echo $j;
            array_push($neww,$new2[$j]);
   }

   $j++;

}
```

4.4 Web Scrapping Algorithm

1.Select a part of the webpage that you would like webscrape.

2.Right-click on it and select inspect

3.Once the html code of the selected part appears to the right in the webpage make sure that the selected part is embedded in correct html div tags

4.Next , copy paste the div class into the findall() of Beautifulsoup package

5.By doing this you can grab each and every element of the website which you want to webscrape.

Follow the below code to get a clear vision on webscraping.

```
# import libraries

from urllib . request import urlopen as uReq

from bs4 import BeautifulSoup as soup

# specify the url

my url=' http : / /www. cricbuzz .com/ cricket−match / live−scores ' # query the website and return the html to the variable 'uClient '

uClient=uReq( my url )

page html=uClient . read ()

 uClient . close ()
```

parse the html using beautiful soap and store in variable ‘soup page soup=soup(page html , ”html . parser ”)

containers=page soup . findAll (” div ” ,{” class ”:”cb−mtch−lst cb−col cb−col}}

4.5 E-Mail

<?php

/ / the message

$msg = ” F i r s t l i n e of t e x t \nSecond l i n e of t e x t ”;

/ / use wordwrap ( ) i f l i n e s are longer than 70 c h a r a c t e r s $msg = wordwrap ($msg , 7 0) ;

/ / send email mail (” someone@example . com” ,”My subject ” ,$msg) ; ?>

Procedure to send an e-mail through localhost:

PHP must be configured correctly in the php.ini file with the details of how the system sends email. Open php.ini file available in /etc/ directory and find the section headed [mail function].

Chapter 5

Results and Discussions

5.1 Output Screenshots and Database Screenshots

Figure 5.1: Main

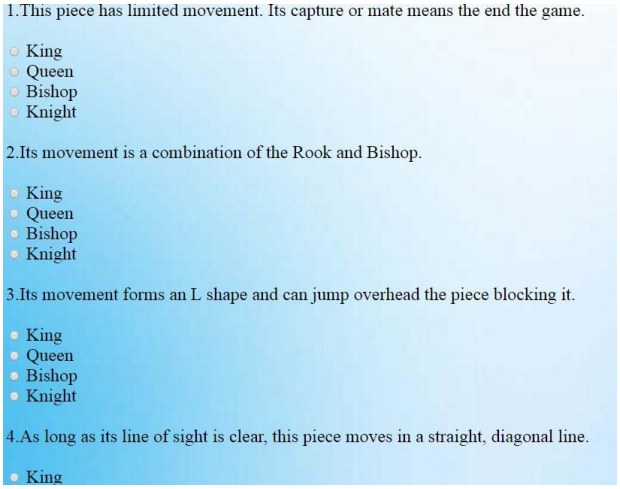


Figure 5.2: Quiz

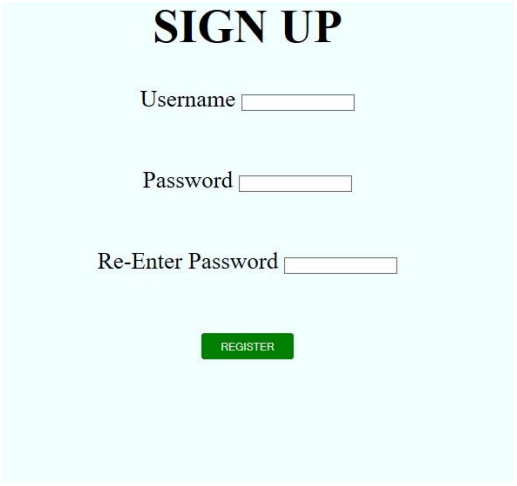


Figure 5.3: SignUp

Figure 5.4: Login

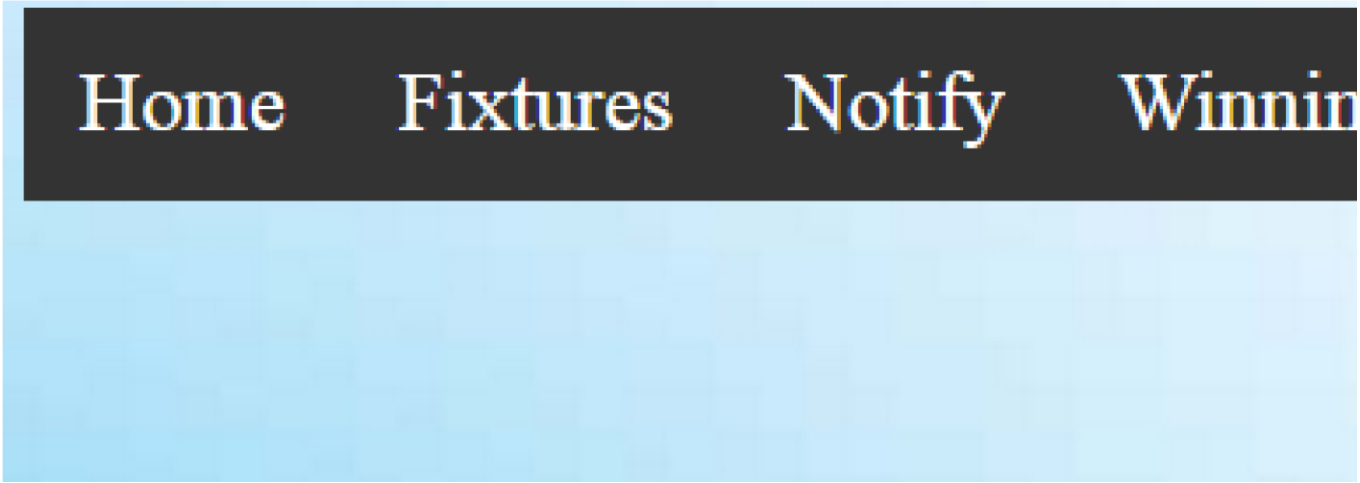


Figure 5.5: Home

Figure 5.6: CricBuzz

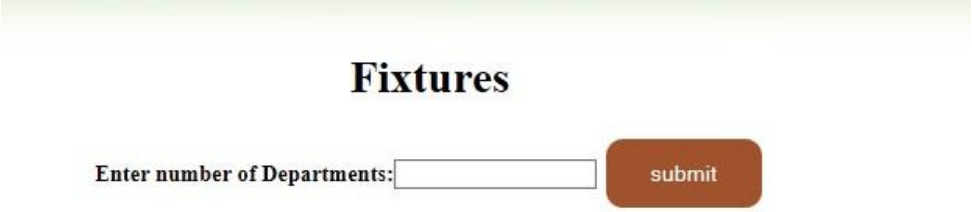


Figure 5.7: Fixtures

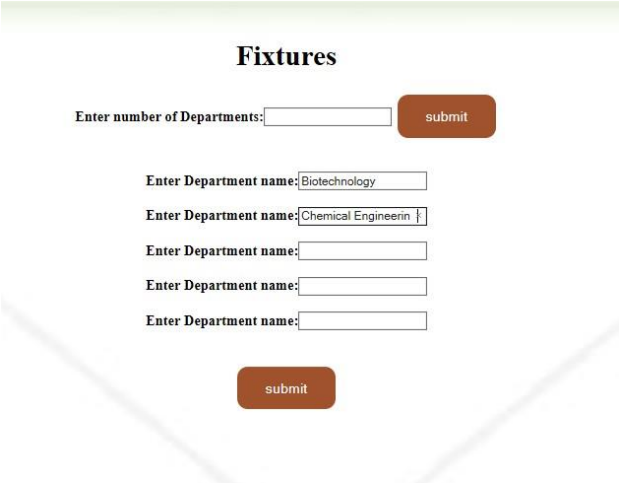


Figure 5.8: Fixtures1

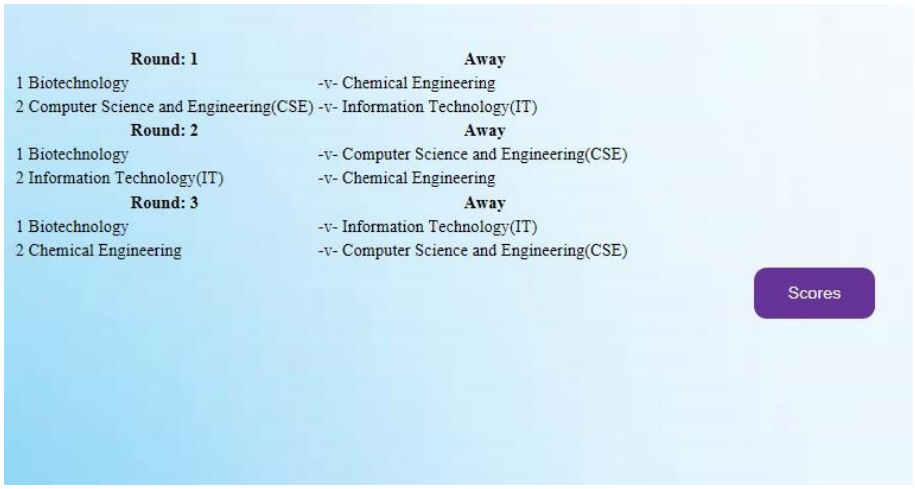


Figure 5.9: RR Pairings

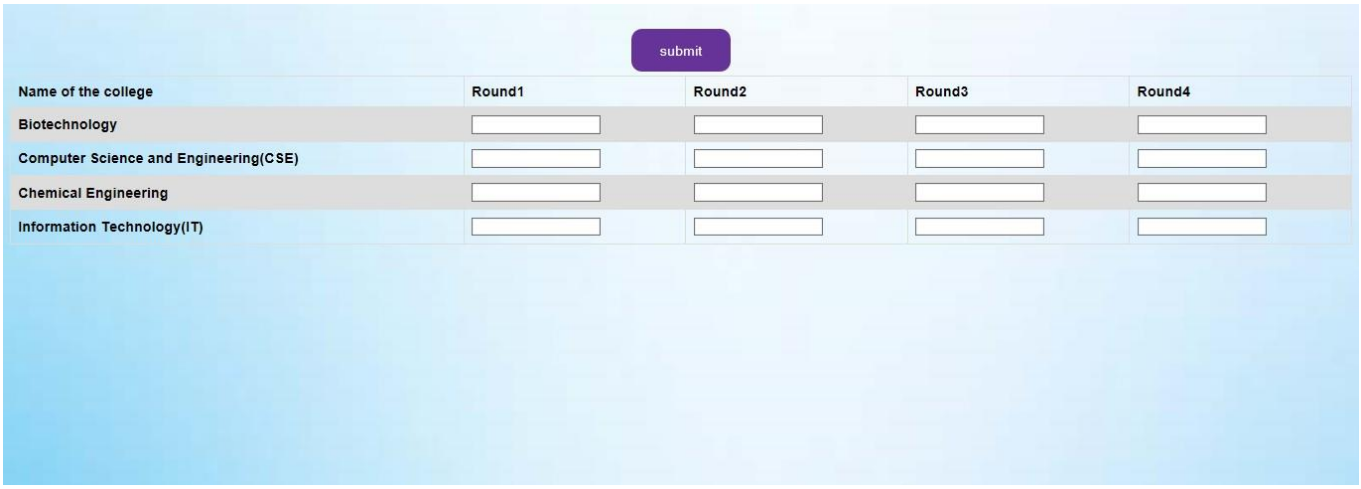


Figure 5.10: Scores

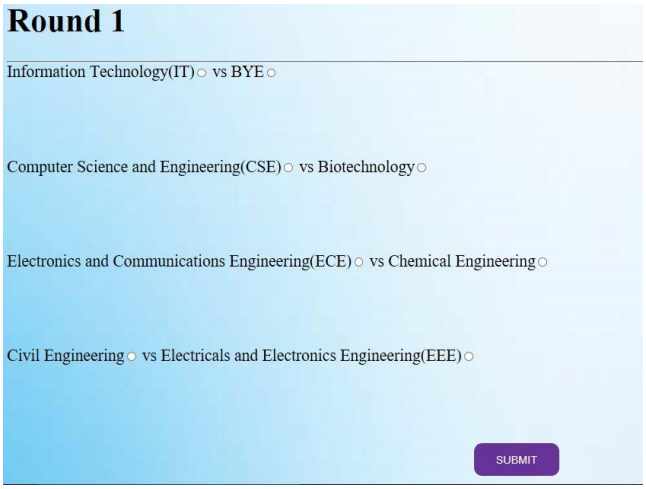


Figure 5.11: Round1

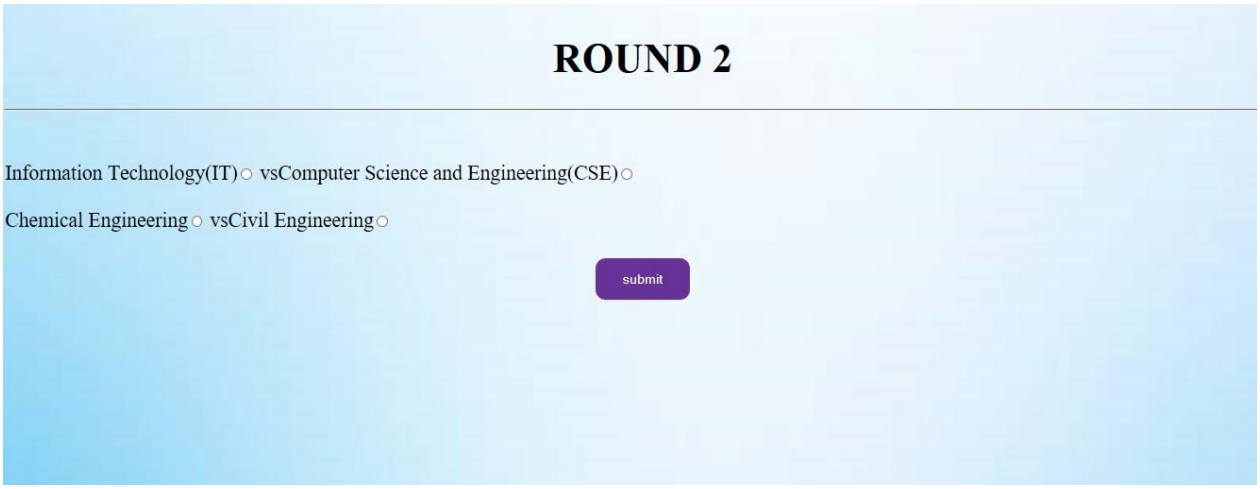


Figure 5.12: Round2

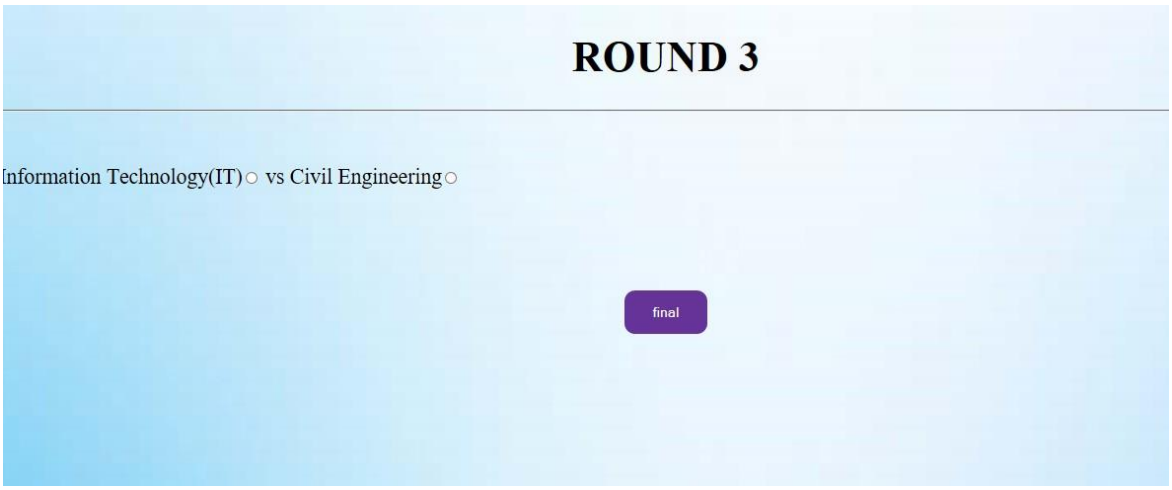


Figure 5.13: Round3

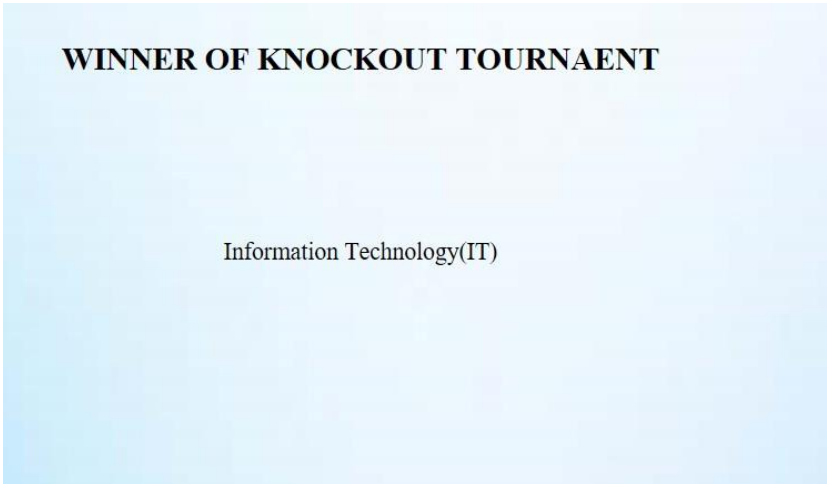


Figure 5.14: Winner

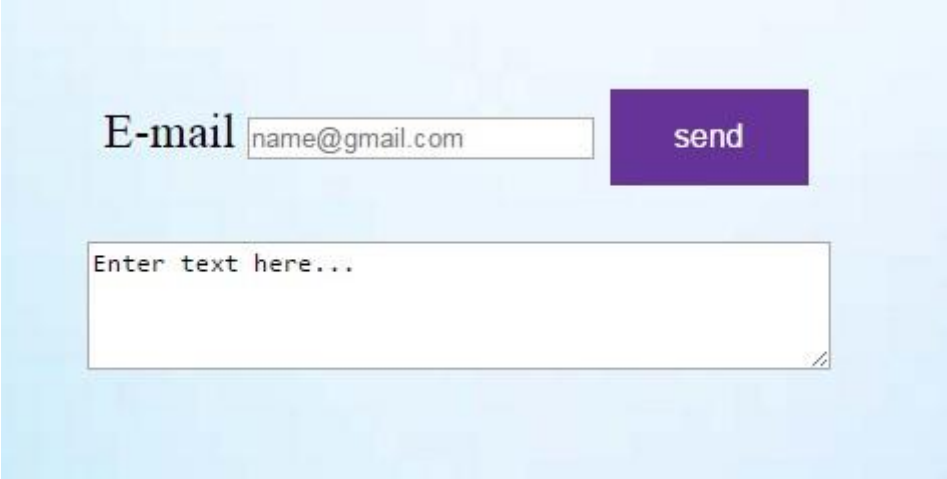
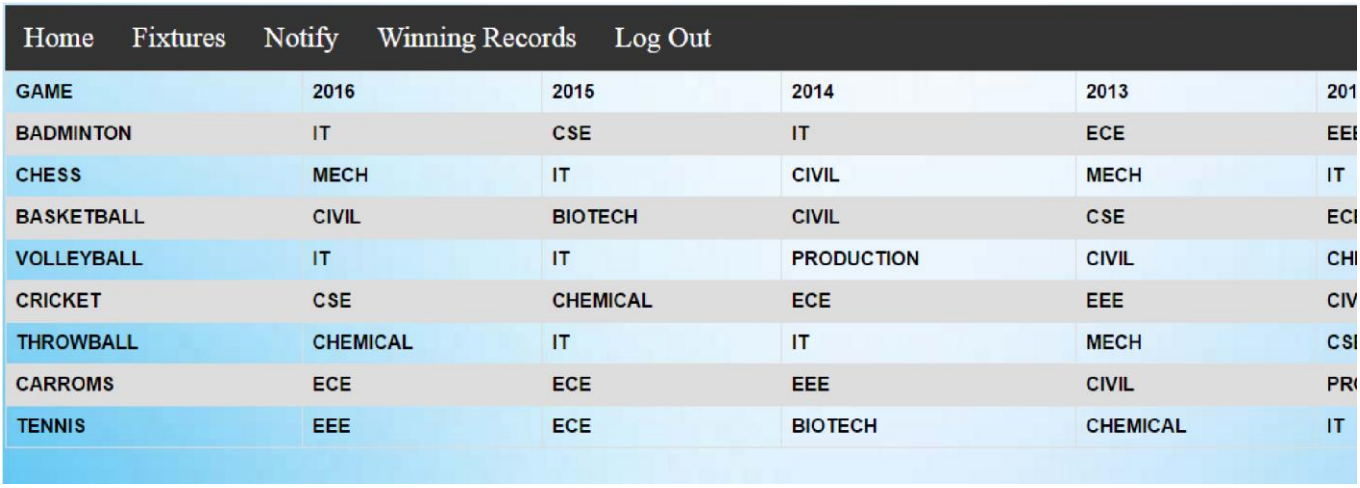


Figure 5.15: Msg



Home Fixtures Notify Winning Records Log Out

GAME	2016	2015	2014	2013	201
BADMINTON	IT	CSE	IT	ECE	EE
CHESS	MECH	IT	CIVIL	MECH	IT
BASKETBALL	CIVIL	BIOTECH	CIVIL	CSE	EC
VOLLEYBALL	IT	IT	PRODUCTION	CIVIL	CH
CRICKET	CSE	CHEMICAL	ECE	EEE	CIV
THROWBALL	CHEMICAL	IT	IT	MECH	CS
CARROMS	ECE	ECE	EEE	CIVIL	PR
TENNIS	EEE	ECE	BIOTECH	CHEMICAL	IT

Figure 5.16: Records

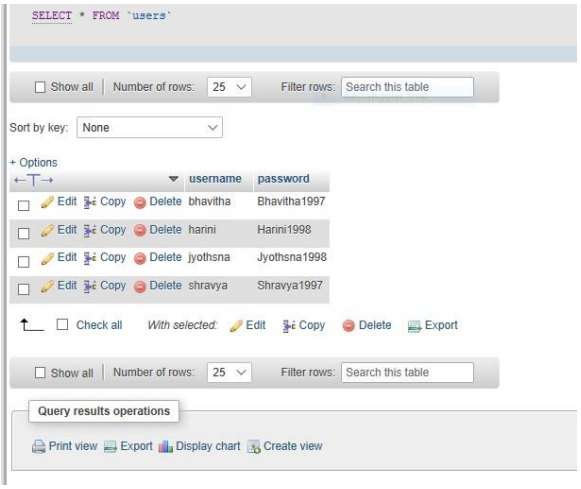


Figure 5.17: User Database

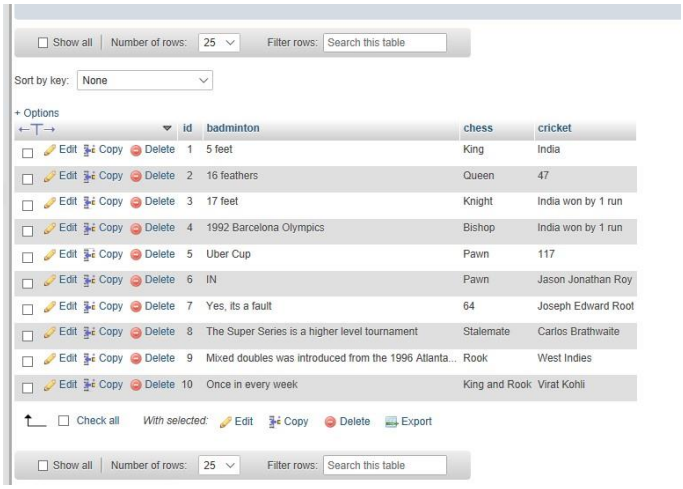


Figure 5.18: Quiz Database

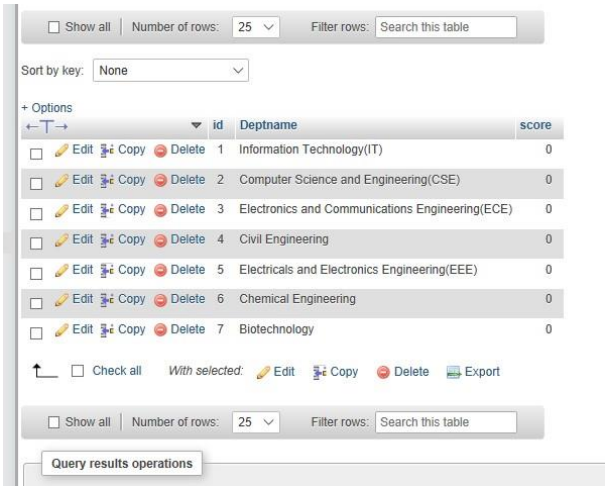


Figure 5.19: Department Registration

Chapter 6

Conclusion and Future work

6.1 Conclusion

With our website,all kinds of malpractices can be avoided in tournaments since we provide computerized pairing.

Reduces workload for coaches as everything to be managed in the tournament is provided in our website.

6.2 Future works

Different types of the tournaments can be added.

Notifications can be sent to students mobile number through our website.

Sports buzz can be implemented from cric buzz i.e live updates from other sports like football ,Basketball , badminton can be included in the home page of the user.

REFERENCES

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