PSP [20ES104] COURSE PROJECT REPORT

On

"CRICKET SCORECARD MANAGEMENT SYSTEM "

Developed By:

H.T.NO	STUDENT NAME
2203A51552	B. SATHWIKA
2203A51535	A. JASPER
2203A51534	A. NIKITHA
2203A51547	B. AKSHITHA

Under the Guidance of

Mr. Riyaz Mohammed

Assistant Professor

Submitted to

Department Computer Science and Artificial Intelligence
SR University
Ananthasagar(V), Hasanparthy(M), Hanamkonda(Dist.) – 506371

www.sru.edu.in

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INDEX

Department of Computer Science

CERTIFICATE

This is to certify that the PSP course project report entitled **"Cricket scorecard management system"** is a record of bonafide work carried out by the student(s) B. Sathwika, A.Jasper, A.Nikitha & A.Akshitha bearing roll number(s) 2203A51552, 2203A51535, 2203A51534 & 2203A51547 of Computer Science during the academic year 2022-23.

Supervisor

(Riyaz Mohammed)

PROBLEM STATEMENT:

Develop a C Application to store details of batters and bowlers in terms of (Name, Runrate,Wickets,Overs,Balls,Runs). Store the data in a dynamically allocated memory of a structure.

Provide the functionality for below mentioned:

1. Read ‘n’ players details dynamically.
2. Sort player details according to:
    - Batsman
    - Bowler
    - Match Summary

MODULES:

In this application all variables and structure are declared globally so that these variables and structure members can be accessed throughout the program at any function call. We can choose any function by using function calls which are declared in switch-case. In order to repeat the loop control statement (do-while) is used with condition. The memory allocation will be done in this program dynamically. The application asks the person who runs the program that how many passengers data he/she want to store.

In this application four modules are used.

1. Read/Input

In this module the application asks the number of players, names of the players, number of ones, number of twos, number of threes, number of fours, number of sixes, balls played by the player, number of bowlers, names of the bowlers, runs given by the bowlers, number of overs, number of wickets taken by the bowler.

2. Sorting

In this module sorting of data is done according to the chosen wise.In this module there is a sub menu which asks to select the sorting wise by using switch case. The sorting sub menu will be like press 1 to sort by batsman details press 2 to sort by bowler details press 3 to sort by match summary press 4 to sort by record press 5 to exit

In this module we used another control statement (do while) so that the application asks whether to continue searching.

3. Print

In this module all the stored details of the players are displayed and the match summary is also printed.

KNOWLEDGE REQUIRED TO DEVELOP THIS APPLICATION

- Control Statements (if, if-else, switch)
- Loop Statements (while/do while, for)
- Arrays (1D/2D-arrays)
- Strings (Strings and Table of strings) and its functions (strcpy, strcmp)
- Functions (Any type of user defined functions)
- Structure (structures and nested structures)
- Pointers (pointer to strings and pointers to structures)
- Dynamic Memory Allocation (malloc/ calloc/ realloc)

SOURCE CODE [.C FILE]:

```
#include<stdio.h>
#include<stdlib.h>

struct batsman
 {
   char name[25];
   int runs,score,balls,toruns,tobal,ones,twos,threes,fours,sixes;
   int max_six,max_run,max_four;
   float str;
 }pl1[100],pl3;
struct bowler
 {
   char name[25];
   int runsgv,wkttkn,overs;
   int max_w;
   float econ;
 }pl2[100],pl4;
int main()
{
 int plno,choice;
  int i,n,m;
  printf("Enter the Batsman detail:\n");
  printf("Enter the number of batsman:\n");
  scanf("%d",&m);
  for(i=0;i<m;i++)
  {
     printf("Enter name of batsman%d:\n",i+1);
       scanf("%s",pl1[i].name);
       printf("Enter the number of ones scored by player%d:\n ",i+1);
       scanf("%d",&pl1[i].ones);
       printf("Enter the number of twos scored by player%d:\n ",i+1);
       scanf("%d",&pl1[i].twos);
       printf("Enter the number of threes scored by player%d:\n ",i+1);
```

```
    scanf("%d",&pl1[i].threes);
    printf("Enter the number of fours scored by player%d:\n ",i+1);
    scanf("%d",&pl1[i].fours);
    printf("Enter the number of sixes scored by player%d:\n ",i+1);
    scanf("%d",&pl1[i].sixes);
    printf("Enter the balls played by the player%d:\n",i+1);
    scanf("%d",&pl1[i].balls);
  }
    printf("\nEnter the bowlers details:\n");
    printf("Enter the number of bowlers:\n");
    scanf("%d",&n);
    for(i=0;i<n;i++)
  {
    printf("\nEnter name of bowler%d:",i+1);
    scanf("%s",pl2[i].name);
    printf("Enter the runs given by the bowler%d:\n ",i+1);
    scanf("%d",&pl2[i].runsgv);
    printf("Enter the overs bowled by the bowler%d:\n",i+1);
    scanf("%d",&pl2[i].overs);
    printf("Enter the wickets taken by the bowler%d\n",i+1);
    scanf("%d",&pl2[i].wkttkn);
  }
  printf("Thank you all details are recorded\n");
  do
   {
    printf("Enter the choice:\n 1)Batsman detail:\n 2)Bowlers detail:\n 3)Match summary:\n
4)Record:\n 5)Exit\n ");
    scanf("%d",&choice);
   switch(choice)
    {

 case 1:
          printf("Enter the batsman number to see his details\n");
          scanf("%d",&plno);
```

```
plno--;
            printf("Player Detail\n");
printf("================================================================
============\n");

 printf("Batsman       runs          balls       fours       sixes       sr   \n");

printf("================================================================
============\n");
pl1[plno].runs=(1*pl1[plno].ones)+(2*pl1[plno].twos)+(3*pl1[plno].threes)+(4*pl1[plno].fours
)+(6*pl1[plno].sixes);
            pl1[plno].str=(pl1[plno].runs*100.00)/pl1[plno].balls;
            printf("          %-15s          %-14d          %-13d          %-11d          %-11d          %-
9.2f\n\n",pl1[plno].name,pl1[plno].runs,pl1[plno].balls,pl1[plno].fours,pl1[plno].sixes,pl1[plno]
.str);
          break;
   case 2:
            printf("Enter the bowlers number to see his details\n");
            scanf("%d",&plno);
            plno--;
             printf("Player Detail\n  ");

printf("================================================================
==\n");
printf(" Bowler       overs          runs       wicket       economy\n");

printf("================================================================
==\n");

 for(i=0;i<n;i++)
            {   pl2[plno].econ=pl2[plno].runsgv/pl2[plno].overs;
}
```

```
printf("%-15s%-14d%-13d%-11d%-
11.2f\n\n",pl2[plno].name,pl2[plno].overs,pl2[plno].runsgv,pl2[plno].wkttkn,pl2[plno].econ);
 break;
case 3:
        printf("Match summary\n");

printf("==========================================================================
===========\n");
          printf(" Batsman       runs          balls       fours      sixes        sr   \n");

printf("==========================================================================
===========\n");

          for(i=0;i<1;i++)
           {

pl1[i].runs=(1*pl1[i].ones)+(2*pl1[i].twos)+(3*pl1[i].threes)+(4*pl1[i].fours)+(6*pl1[i].sixes);
              pl3.toruns+=pl1[i].runs;
              pl1[i].str=(pl1[i].runs*100.00)/pl1[i].balls;
              printf("        %-15s        %-14d        %-13d        %-11d        %-11d        %-
9.2f\n\n",pl1[i].name,pl1[i].runs,pl1[i].balls,pl1[i].fours,pl1[i].sixes,pl1[i].str);
           }
            printf("TOTAL RUNS:%d\n\n",pl3.toruns);
          printf("\n\n");

printf("==========================================================================
=\n");
          printf(" Bowler       overs          runs       wicket      economy\n");

printf("==========================================================================
==\n");

           for(i=0;i<n;i++)
           {   pl2[i].econ=pl2[i].runsgv/pl2[i].overs;
```

```
            printf("          %-15s          %-14d          %-13d          %-11d          %-
11.2f\n\n\n",pl2[i].name,pl2[i].overs,pl2[i].runsgv,pl2[i].wkttkn,pl2[i].econ);

}
break;
 case 4: pl3.max_run=0,pl4.max_w=0,pl3.max_four=0,pl3.max_six=0;
          for(i=0;i<m;i++)
            {
pl1[i].runs=(1*pl1[i].ones)+(2*pl1[i].twos)+(3*pl1[i].threes)+(4*pl1[i].fours)+(6*pl1[i].sixes);
              if(pl3.max_run<pl1[i].runs)
                {
                  pl3.max_run=pl1[i].runs;
             }
              if(pl3.max_six<pl1[i].sixes)
                {
                 pl3.max_six=pl1[i].sixes;
               }
              if(pl3.max_four<pl1[i].fours)
                {
                 pl3.max_four=pl1[i].fours;
                 }if(pl4.max_w<pl2[i].wkttkn)
                {
                 pl4.max_w=pl2[i].wkttkn;
                 }
            }
          printf("Highest runs scored by the batsman:%d\n",pl3.max_run);

          printf("Maximum fours scored by the batsman:%d\n",pl3.max_four);

          printf("Maximum sixes scored by the batsman:%d\n",pl3.max_six);

          printf("Maximum wickets taken by the bowler:%d\n",pl4.max_w);
    break;
```

```
case 5:
          exit(1);
        default:
            printf("Enter the correct choice\n");
            break;
      }

   }while(choice!=5);
   return 0;
}
```

RESULTS:

```
Enter the Batsman detail:
Enter the number of batsman:
2
Enter name of batsman1:
rohith
Enter the number of ones scored by player1:
 10
Enter the number of twos scored by player1:
 5
Enter the number of threes scored by player1:
 1
Enter the number of fours scored by player1:
 3
Enter the number of sixes scored by player1:
 2
Enter the balls played by the player1:
24
Enter name of batsman2:
hardik
Enter the number of ones scored by player2:
 3
Enter the number of twos scored by player2:
 3
Enter the number of threes scored by player2:
 1
Enter the number of fours scored by player2:
 2
Enter the number of sixes scored by player2:
 3
Enter the balls played by the player2:
12

Enter the bowlers details:
Enter the number of bowlers:
2

Enter name of bowler1:bumrah
Enter the runs given by the bowler1:
 43
Enter the overs bowled by the bowler1:
3
Enter the wickets taken by the bowler1
1

Enter name of bowler2:ishan
Enter the runs given by the bowler2:
 42
Enter the overs bowled by the bowler2:
3
```

```
Enter the wickets taken by the bowler2
0
Thank you all details are recorded
Enter the choice:
 1)Batsman detail:
 2)Bowlers detail:
 3)Match summary:
 4)Record:
 5)Exit
 1
Enter the batsman number to see his details
1
                    Player Detail
================================================================================
 Batsman        runs          balls        fours       sixes         sr
================================================================================
 rohith         47            24           3           2           195.83

Enter the choice:
 1)Batsman detail:
 2)Bowlers detail:
 3)Match summary:
 4)Record:
 5)Exit
 2
Enter the bowlers number to see his details
2
                     Player Detail
  ============================================================
 Bowler        overs          runs        wicket       economy
============================================================
 ishan          3             42           0           14.00

Enter the choice:
 1)Batsman detail:
 2)Bowlers detail:
 3)Match summary:
 4)Record:
 5)Exit
 3
                  Match summary
================================================================================
 Batsman        runs          balls        fours       sixes         sr
================================================================================
 rohith         47            24           3           2           195.83
```

TOTAL RUNS:47

Bowler	overs	runs	wicket	economy
bumrah	3	43	1	14.00
ishan	3	42	0	14.00

Enter the choice:
1)Batsman detail:
2)Bowlers detail:
3)Match summary:
4)Record:
5)Exit
4
Highest runs scored by the batsman:47
Maximum fours scored by the batsman:3
Maximum sixes scored by the batsman:3
Maximum wickets taken by the bowler:1
Enter the choice:
1)Batsman detail:
2)Bowlers detail:
3)Match summary:
4)Record:
5)Exit
5

Process exited after 141.1 seconds with return value 1
Press any key to continue . . .