#include <stdio.h>

#include <stdlib.h>

#include <string.h>

/\*variables for toss

comp\_toss : to store computer toss number

human toss : to store human toss number

toss\_total : to store sum of toss numbers

name : to store name of user

game\_starter : to store start string to continue program

toss : to store even/odd choice

decision : to store decision of batting/bowling

\*/

int comp\_toss=0,human\_toss=0,toss\_total=0;

char name[50],game\_starter[10],toss[5],decision[10];

/\*variables for innings

comp\_ball : to store ball by computer

human\_run : to store runs by human player

human\_score : to store total human runs

comp\_run : to store run by computer

human\_ball : to store ball by human player

comp\_score : to store runs by computer

\*/

int comp\_ball=0,human\_run=0,human\_score=0,comp\_run=0,human\_ball=0,comp\_score=0;

/\*variables for Artificial intelligence

no : to store no. of balls delivered

intelligence : array to store player's run of past balls

\*/

int no=0,i;

int intelligence[50];

void tossTime()

{

comp\_toss=rand()%6+1;// computer genrates its toss by rand() function

printf("\n<<<-----TOSS----->>>\n\n");

printf("ODDS OR EVENS: ");//user will enter toss choice

gets(toss);

printf("\nThrow Toss: ");//user will enter toss number

scanf("%d",&human\_toss);

while(human\_toss>6||human\_toss<1)// re enter toss number if it exeeds limit 1-6

{

printf("You Must Enter The Numbers From 1-6\n");

printf("Throw Toss: ");

scanf("%d",&human\_toss);

}

printf("Computer's Toss: %d\n",comp\_toss);//computer prints its toss number

toss\_total=human\_toss+comp\_toss;//sum of toss

printf("\nToss Total = %d\n",toss\_total);

if(strcmp(toss,"EVENS")==0||strcmp(toss,"EVEN")==0)

{

if(toss\_total%2==0)

{

printf("\nIt's an even number\n");

printf("Yeahh!, You Won The Toss\n");

printf("\nChoose Batting or Bowling: ");

scanf("%s",decision);

}

else

{

printf("\nIt's an odd number\n");

if( (rand()%6+1) %2==0)

{

strcpy(decision,"cBATTING");

printf("Ohhh! You Lost The Toss\n");

printf("COMPUTER CHOOSES BATTING\n\n");

}

else

{

strcpy(decision,"cBOWLING");

printf("Ohhh! You Lost The Toss\n");

printf("COMPUTER CHOOSES BOWLING\n\n");

}

}

}

else

{

if(toss\_total%2==0)

{

printf("It's an even number\n");

if( (rand()%6+1) %2==0)

{

strcpy(decision,"cBATTING");

printf("Ohhh! You Lost The Toss\n");

printf("COMPUTER CHOOSES BATTING\n\n");

}

else

{

strcpy(decision,"cBOWLING");

printf("Ohhh! You Lost The Toss\n");

printf("COMPUTER CHOOSES BOWLING\n\n");

}

}

else

{

printf("It's an odd number\n");

printf("Yeahh!, You Won The Toss\n");

printf("\nChoose Batting or Bowling: ");

scanf("%s",decision);

}

}

printf("\n");

}

void playerBattingFirst()

{

do

{

comp\_ball=rand()%6+1;

printf("Player's Run: ");

scanf("%d",&human\_run);

while(human\_run>6||human\_run<1)

{

printf("You Must Enter The Numbers From '1' To '6' \n");

printf("Player's Run: ");

scanf("%d",&human\_run);

}

intelligence[++no]=human\_run;

if(no>2)

{

if(intelligence[no-1]==intelligence[no-2])

comp\_ball=intelligence[no-1];

if((intelligence[no-1]-intelligence[no-2])==1)

comp\_ball=intelligence[no-1]+1;

if(comp\_ball>6)

comp\_ball-=6;

if((intelligence[no-1]-intelligence[no-2])==-1)

comp\_ball=intelligence[no-1]-1;

if(comp\_ball<1)

comp\_ball+=6;

if((intelligence[no-1]-intelligence[no-2])==2)

comp\_ball=intelligence[no-1]+2;

if(comp\_ball>6)

comp\_ball-=6;

if((intelligence[no-1]-intelligence[no-2])==-2)

comp\_ball=intelligence[no-1]-2;

if(comp\_ball<1)

comp\_ball+=6;

}

if(no>4)

{

if(intelligence[no-1]==intelligence[no-3]&&intelligence[no-2]==intelligence[no-4])

comp\_ball=intelligence[no-2];

}

printf("Computer's Ball: %d\n",comp\_ball);

if(comp\_ball==human\_run)

{

printf("\nOUT!!!!!\n");

printf("NOW , ITS COMPUTER'S TURN TO BAT\n");

printf("Target for Computer - %d Run/Runs\n\n",(human\_score+1));

do

{

comp\_run=rand()%6+1;

printf("Player's Ball: ");

scanf("%d",&human\_ball);

while(human\_ball>6||human\_ball<1)

{

printf("You Must Enter The Numbers From '1' To '6' \n");

printf("Player's Ball: ");

scanf("%d",&human\_ball);

}

printf("Computer's Run: %d\n",comp\_run);

if(human\_ball==comp\_run)

{

printf("\nOUT!!!!!\n");

break;

}

else

comp\_score+=comp\_run;

if(comp\_score>human\_score)

break;

} while(comp\_run!=human\_ball);

break;

}

else

human\_score+=human\_run;

} while(human\_run!=comp\_ball);

}

void computerBattingFirst()

{

do

{

comp\_run=rand()%6+1;

printf("Player's Ball: ");

scanf("%d",&human\_ball);

while(human\_ball>6||human\_ball<1)

{

printf("You Must Enter The Numbers From '1' To '6' \n");

printf("Player's Ball: ");

scanf("%d",&human\_ball);

}

printf("Computer's Run: %d\n",comp\_run);

if(human\_ball==comp\_run)

{

printf("\nOUT!!!!!\n");

printf("NOW, ITS COMPUTER'S CHANCE TO BOWL\n");

printf("Target for You - %d Run/Runs\n\n",(comp\_score+1));

do

{

comp\_ball=rand()%6+1;

printf("Player's Run: ");

scanf("%d",&human\_run);

while(human\_run>6||human\_run<1)

{

printf("You Must Enter The Numbers From '1' To '6' \n");

printf("Player's Run: ");

scanf("%d",&human\_run);

}

intelligence[++no]=human\_run;

if(no>2)

{

if(intelligence[no-1]==intelligence[no-2])

comp\_ball=intelligence[no-1];

if((intelligence[no-1]-intelligence[no-2])==1)

comp\_ball=intelligence[no-1]+1;

if(comp\_ball>6)

comp\_ball-=6;

if((intelligence[no-1]-intelligence[no-2])==-1)

comp\_ball=intelligence[no-1]-1;

if(comp\_ball<1)

comp\_ball+=6;

if((intelligence[no-1]-intelligence[no-2])==2)

comp\_ball=intelligence[no-1]+2;

if(comp\_ball>6)

comp\_ball-=6;

if((intelligence[no-1]-intelligence[no-2])==-2)

comp\_ball=intelligence[no-1]-2;

if(comp\_ball<1)

comp\_ball+=6;

}

if(no>4)

{

if(intelligence[no-1]==intelligence[no-3]&&intelligence[no-2]==intelligence[no-4])

comp\_ball=intelligence[no-2];

}

printf("Computer's Ball: %d\n",comp\_ball);

if(comp\_ball==human\_run)

{

printf("\nOUT!!!!!\n");

break;

}

else

human\_score+=human\_run;

if(human\_score>comp\_score)

break;

}while(comp\_ball!=human\_run);

}

else

comp\_score+=comp\_run;

} while(comp\_run!=human\_ball);

}

void results()

{

printf("\nComputer's Score: %d\n",comp\_score);

printf("Your Score: %d\n",human\_score);

printf("\n");

if(human\_score<comp\_score)

{

printf(" COMPUTER WINS\n");

printf(" Better Luck Next Time\n");

printf(" |====||====| Thanks For Playing |====||====|\n");

}

else

if(human\_score>comp\_score)

{

printf(" Congrats, YOU WIN\n");

printf(" |====||====| Thanks For Playing |====||====|\n");

}

else

{

printf(" THERE IS A TIE\n");

printf(" |====||====| Thanks For Playing |====||====|\n");

}

printf("{{ {{ {{ <<<< HOPE , YOU LIKED THE GAME >>>> }} }} }}\n");

printf("\n\nThe Game was developed by:\n\n");

printf("Kush Agarwal\n");

printf("NBTG14987\n\n");

printf("Abhilash Tyagi\n");

printf("NBTG13867\n\n");

}

void ratingTime()

{

int rating;

FILE \*feedback;

feedback=fopen("Feedback.txt", "a");

printf("How much would you like to rate us out of 5?\nEnter Rating: ");

scanf("%d",&rating);

while(rating>5||rating<1)

{

printf("You Must Enter The Rating From 1-5\n");

printf("Enter Rating: ");

scanf("%d",&rating);

}

fprintf(feedback, "%s rated us %d/5.\n", name, rating);

}

int main()

{

printf("\n");

printf(" MINI PROJECT\n");

printf(" SDF LAB\n\n");

printf(" WELCOME TO THE GAME\n");

printf(" ------+++ DIGITAL HAND CRICKET +++------ \n");

printf("\n");

printf("Enter Your Name To Move Ahead\n");

gets(name);

printf("Here are some guidelines to play this game.\n");

printf("First, there will be a toss between the COMPUTER and PLAYER i.e. you\n");

printf("You will enter a choice of even or odd and throw your toss number between 1-6, COMPUTER will do the same\n");

printf("If the sum of both the toss numbers is even, then the player chosing even will win the toss, and vice-versa\n");

printf("The winner of the toss will get a chance to choose BATTING or BOWLING\n");

printf("The Game Will Than Start According To The Choice Proceeded\n");

printf("Everytime, The User Will Put The Ball Or Bat Before The System\n");

printf("Everytime the System gives you the Message \"Player's Run\", You will enter Your Number - the run.\n");

printf("Everytime the System gives you the Message \"Player's Ball\", You will enter Your Number - the ball.\n");

printf("You Must Enter The Numbers From '1' To '6' and in the Same Limits the Computer Will Play\n");

printf("At The End Of First Innings, The Target Will be Displayed\n");

printf("After the second innings, The Winner Will Be Decided On The Basis Of The Final Scores of both the players\n");

printf("\n");

printf("Now , Type \"START\" To Start The Game\n");

gets(game\_starter);

tossTime();

if(strcmp(decision,"BATTING")==0||strcmp(decision,"cBOWLING")==0)

{

playerBattingFirst();

}

else

{

computerBattingFirst();

}

results();

ratingTime();

return 0;

}