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#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int ll;
ll p = 1, run1 = 0, wicket = 0, wi = 0;
ll total_run = 0, Total_Run = 0, W1 = 0, W2 = 0;
class Player
{
    vector<string> FPlayerName, SecPlayerName;

public:
    // Input player name.....
    void set_player_name(ll n, ll p)
    {
        for (ll i = 0; i < n; i++)
        {
            if (i == 0)
                cout << "1st player name: ";
            else if (i == 1)
                cout << "2nd player name: ";
            else if (i == 2)
                cout << "3rd player name: ";
            else
                cout << (i + 1) << "th player name: ";
            string s1;
            cin >> s1;
            if (p == 1)
                FPlayerName.push_back(s1);
            else
                SecPlayerName.push_back(s1);
        }
    }
};

class GAME
{
public:
    // set every bowl run.....
    vector<ll> bowl;
    GAME(ll t)
    {
        bowl.push_back(t);
    }
}
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11 d, s = 0;
GAME(11 w, 11 d1)
{
    wi = w, d = d1;
}
GAME(11 p1, 11 run2, 11 wicket1)
{
    p = p1;
    run1 = run2;
    wicket = wicket1;
}
void display()
{
    for (auto it : bowl)
    {
        if (wicket < (wi - 1))
        {
            if (it <= 6)
            {
                if (p == 1)
                    cout << "1st"
                        << " bowl- ",
                    p++;
                else if (p == 2)
                    cout << "2nd"
                        << " bowl- ",
                    p++;
                else if (p == 3)
                    cout << "3rd"
                        << " bowl- ",
                    p++;
                else
                    cout << p << "th bowl- ", p++;

                if (it >= 0)
                {
                    cout << "valid bowl- ", run1 += it;
                    cout << "Run = " << it << nl;
                }
                else
                {
                    cout << "invalid bowl- ", run1 += 1;
                    cout << "Run = " << 1 << nl;
                }
            }
        }
    }
}

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        if (it == 6)
            cout << "Wow Six!!\n";
        else if (it == 4)
            cout << "Great Four!!\n";
        else
            cout << "Extra run!!\n";

        cout << "Run:" << run1 << " Wicket:" << wicket << " bowl:" <<
p - 1 << nl << nl;
    }
    else if (it > 6)
    {
        if (p == 1)
            cout << "1st"
                << " bowl- ",
                p++;
        else if (p == 2)
            cout << "2nd"
                << " bowl- ",
                p++;
        else if (p == 3)
            cout << "3rd"
                << " bowl- ",
                p++;
        else
            cout << p << "th bowl- ", p++;

        cout << "valid bowl- ", run1 += 0;
        cout << "Wicket = 1\n";
        wicket++;
        if (wicket == 1)
            cout << "This team lost their 1st Wicket.\n";
        else if (wicket == 2)
            cout << "This team lost their 2nd Wicket.\n";
        else if (wicket == 3)
            cout << "This team lost their 3rd Wicket\n";
        else
            cout << "This team lost their " << wicket << "th
Wicket\n";

        cout << "Run:" << run1 << " Wicket:" << wicket << " bowl:" <<
p - 1 << nl << nl;
    }
    else
    {

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        cout << p << "th bowl- ", p++;
        cout << "Invalid bowl- Run = 0\n";
        cout << "Run:" << run1 << " Wicket:" << wicket << " bowl:" <<
p - 1 << nl << nl;
    }
}
else
{
    cout << "There are no more players.\n", p++;
    cout << "Run:" << run1 << " Wicket:" << wicket << " bowl:" << p -
1 << nl << nl;
    break;
}
}
};

class Team
{
public:
    // Set team name.....
    string teamName;
    void setTeamname()
    {
        cin >> teamName;
    }

    // Toss for the game.....
    ll tossTime(Team t1, Team t2)
    {
        srand(time(0));
        ll random;
        random = (rand() % 2);
        cout << "It toss time----" << nl;
        if (random == 0)
        {
            cout << t1.teamName << " Will throw the coin." << nl;
            random = (rand() % 2);
            if (random == 0)
            {
                cout << "Congratulations Team " << t1.teamName << " has won the
toss\n";
                return 0;
            }
            else

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        {
            cout << "Congratulations Team " << t2.teamName << " has won the
toss\n";
            return 1;
        }
    }
    else
    {
        cout << t2.teamName << " Will throw the coin" << endl;
        random = (rand() % 2);
        if (random == 0)
        {
            cout << "Congratulations Team " << t1.teamName << " has won the
toss\n";
            return 0;
        }
        else
        {
            cout << "Congratulations Team " << t2.teamName << " has won the
toss\n";
            return 1;
        }
    }
}

// who bat first.....
bool isBatting(Team t)
{
    char choice[4];
    cout << t.teamName << " -Would you like to Bat/bowl first (Bat/bowl): ";
    cin >> choice;
    if (strcmp(choice, "Bat") == 0 || strcmp(choice, "bat") == 0 ||
strcmp(choice, "bowl") == 0 || strcmp(choice, "bowl") == 0)
    {
        if (strcmp(choice, "Bat") == 0 || strcmp(choice, "bat") == 0)
            return true;
        else
            return false;
    }
    else
    {
        cout << "Invalid Input\nPlz re-enter your choice." << nl;
        return isBatting(t);
    }
}

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};

int main()
{
    cout << "This is a Cricket Game." << nl;
    ll over;
    cout << "Enter Number of over(1x6)for the game: ", cin >> over;

    // Input team name.....
    Team t[2], t0;
    cout << "Enter the First Team name: ";
    t[0].setTeamname();
    cout << "Enter the Second Team name: ";
    t[1].setTeamname();

    // Toss for this game.....
    ll toss_won, toss_lost;
    toss_won = t0.tossTime(t[0], t[1]);
    if (toss_won == 0)
        toss_lost = 1;
    else
        toss_lost = 0;
    ll d = t0.isBatting(t[toss_won]);

    // Input player Number.....
    ll player_number;
    cout << "Enter player number : ", cin >> player_number;
    GAME c(player_number, player_number);

    // Input player name.....
    Player obj;
    if (d == 1)
        cout << "Enter " << player_number << " player name for batting team:" <<
t[toss_won].teamName << nl;
    else
        cout << "Enter " << player_number << " player name for bowling team:" <<
t[toss_won].teamName << nl;
    obj.set_player_name(player_number, 1);
    if (d == 0)
        cout << "Enter " << player_number << " player name for batting team:" <<
t[toss_lost].teamName << nl;
    else
        cout << "Enter " << player_number << " player name for bowling team:" <<
t[toss_lost].teamName << nl;
    obj.set_player_name(player_number, 2);
}

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// Input Each ball Run for 1st team.....
cout << "Valid Run(0<=x<=6),No ball/wide ball(x<0) and wicket(x>6)\n";
if (d == 1)
    cout << "Enter " << 6 * over << " bowl Run for team: " <<
t[toss_won].teamName << nl;
else
    cout << "Enter " << 6 * over << " bowl Run for team: " <<
t[toss_lost].teamName << nl;
for (ll i = 1; i <= 6 * over; i++)
{
    ll x;
    cin >> x;
    GAME b(x);
    b.display();
    while (x < 0)
    {
        cout << "Wrong bowl, again bowl plz." << nl;
        cin >> x;
        GAME b(x);
        b.display();
    }
}
cout << "First innings was END!!\n\n";
total_run = run1, W1 = wicket;

// Input Each ball Run for 2nd team.....
GAME k(1, 0, 0);
cout << "Valid Run(0<=x<=6),No/wide ball(x<0) and wicket(x>6)\n";
if (d == 0)
    cout << "Enter " << 6 * over << " bowl Run for team: " <<
t[toss_won].teamName << nl;
else
    cout << "Enter " << 6 * over << " bowl Run for team: " <<
t[toss_lost].teamName << nl;
for (ll i = 1; i <= 6 * over; i++)
{
    ll x;
    cin >> x;
    GAME b(x);
    b.display();
    while (x < 0)
    {
        cout << "Wrong bowl, again bowl plz." << nl;
        cin >> x;
    }
}

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        GAME b(x);
        b.display();
    }
}
Total_Run = run1, W2 = wicket;

// Result for the
match.....
cout << "\n.....AFTER TWO INNINGS.....\n";
if (d == 1)
    cout << "Team " << t[toss_won].teamName << " Result." << nl;
else
    cout << "Team " << t[toss_lost].teamName << " Result." << nl;
cout << "Total Run: " << total_run << " Wicket: " << W1 << nl;

if (d == 0)
    cout << "Team " << t[toss_won].teamName << " Result." << nl;
else
    cout << "Team " << t[toss_lost].teamName << " Result." << nl;
cout << "Total Run: " << Total_Run << " Wicket: " << W2 << nl;
cout << nl << nl;
if (total_run > Total_Run)
{
    ll dif = total_run - Total_Run;
    if (d == 1)
        cout << "Congratulations!!! Team " << t[toss_won].teamName << " for
WON the game by " << dif << " Run." << nl;
    else
        cout << "Congratulations!!! Team " << t[toss_lost].teamName << " for
WON the game by " << dif << " Run." << nl;
}
else if (total_run < Total_Run)
{
    ll dif = Total_Run - total_run;
    if (d == 0)
        cout << "Congratulations!!! Team " << t[toss_won].teamName << " for
WON the game by " << dif << " Run." << nl;
    else
        cout << "Congratulations!!! Team " << t[toss_lost].teamName << " for
WON the game by " << dif << " Run." << nl;
}
else
    cout << "The Match is draw.\n\n";
}

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