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1  #include<stdio.h>
2  #include<stdlib.h>
3  #include<time.h>
4
5
6  void menu();
7  int roll_a_dice();
8  int compute_points(int,int);
9
10
11 int main(){
12
13     srand(time(NULL));
14     int option,turnCounter=1,roundCounter=1,player1RoundPoint,player2RoundPoint,player1OverallPoint=0,
player2OverallPoint=0;
15     int dice1,dice2;
16     menu();
17     scanf("%d",&option);
18
19     while(option!=1 && option!=2){
20         fflush(stdin);
21         printf("Please enter option either 1 or 2!\n");
22         printf("Option: ");
23         scanf("%d",&option);
24     }
25
26     if(option==1){
27         printf("\n\nBO BING STARTS\n");
28         printf("Dice are rolled by each player in order to select who will start first:\n");
29         dice1=roll_a_dice();
30         dice2=roll_a_dice();
31         printf("Dice 1 (rolled by player 1): %d\tDice 2 (rolled by player 2): %d\n",dice1,dice2);
32
33         while(dice1==dice2){
34             printf("Equal dice by bot players! Dice are rolled again!\n");
35             dice1=roll_a_dice();
36             dice2=roll_a_dice();
37             printf("Dice 1 (rolled by player 1): %d\tDice 2 (rolled by player 2): %d\n",dice1,dice2);
38         }
39
40         if(dice1>dice2){//player 1 starts
41             printf("Player 1 is starting!\n\n");
42             while(roundCounter<=3){
43                 printf("ROUND %d\n",roundCounter);
44                 printf("-----\n");
45                 printf("PLAYER 1'S TURN\n\n");
46
47                 while(turnCounter<=3){
48                     printf("Dice are rolled: ");
49                     dice1=roll_a_dice();
50                     dice2=roll_a_dice();
51                     printf("Dice 1: %d\tDice 2: %d\n",dice1,dice2);
52                     player1RoundPoint=compute_points(dice1,dice2);
53                     printf("Points: %d\n",player1RoundPoint);
54                     player1OverallPoint+=player1RoundPoint;
55                     printf("Total Points: %d\n\n",player1OverallPoint);
56                     turnCounter++;
57                 }
58                 printf("PLAYER 1'S TURN IS OVER!\n");
59                 printf("Round %d POINTS: %d\n\n",roundCounter,player1RoundPoint);
60                 turnCounter=1;
61
62                 while(turnCounter<=3){
63                     printf("PLAYER 2'S TURN\n");
64                     printf("Dice are rolled: ");
65                     dice1=roll_a_dice();

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66         dice2=roll_a_dice();
67         printf("Dice 1: %d\tDice 2: %d\n",dice1,dice2);
68         player2RoundPoint=compute_points(dice1,dice2);
69         printf("Points: %d\n",player2RoundPoint);
70         player2OverallPoint+=player2RoundPoint;
71         printf("Total Points: %d\n\n",player2OverallPoint);
72         turnCounter++;
73     }
74     printf("PLAYER 2'S TURN IS OVER!\n");
75     printf("Round %d POINTS: %d\n\n",roundCounter,player2RoundPoint);
76     turnCounter=1;
77
78     roundCounter++;
79 }
80 }
81 else{//player2 starts
82     printf("Player 2 is starting!\n\n");
83     while(roundCounter<=3){
84         printf("ROUND %d\n",roundCounter);
85         printf("-----\n");
86         printf("PLAYER 2'S TURN\n\n");
87
88         while(turnCounter<=3){
89             printf("Dice are rolled: ");
90             dice1=roll_a_dice();
91             dice2=roll_a_dice();
92             printf("Dice 1: %d\tDice 2: %d\n",dice1,dice2);
93             player2RoundPoint=compute_points(dice1,dice2);
94             printf("Points: %d\n",player2RoundPoint);
95             player2OverallPoint+=player2RoundPoint;
96             printf("Total Points: %d\n\n",player2OverallPoint);
97             turnCounter++;
98         }
99         printf("PLAYER 2'S TURN IS OVER!\n");
100        printf("Round %d POINTS: %d\n\n",roundCounter,player2RoundPoint);
101        turnCounter=1;
102
103        while(turnCounter<=3){
104            printf("PLAYER 1'S TURN\n");
105            printf("Dice are rolled: ");
106            dice1=roll_a_dice();
107            dice2=roll_a_dice();
108            printf("Dice 1: %d\tDice 2: %d\n",dice1,dice2);
109            player1RoundPoint=compute_points(dice1,dice2);
110            printf("Points: %d\n",player1RoundPoint);
111            player1OverallPoint+=player1RoundPoint;
112            printf("Total Points: %d\n\n",player1OverallPoint);
113            turnCounter++;
114        }
115        printf("PLAYER 1'S TURN IS OVER!\n");
116        printf("Round %d POINTS: %d\n\n",roundCounter,player1RoundPoint);
117        turnCounter=1;
118
119        roundCounter++;
120    }
121 }
122
123 printf("FINAL RESULT:\n");
124 printf("-----\n");
125 printf("PLAYER 1: %d POINTS\n",player1OverallPoint);
126 printf("PLAYER 2: %d POINTS\n\n",player2OverallPoint);
127
128 if(player1OverallPoint>player2OverallPoint)
129     printf("PLAYER 1 IS WINNER! CONGRATULATIONS...");
130 else if(player2OverallPoint>player1OverallPoint)
131     printf("PLAYER 2 IS WINNER! CONGRATULATIONS...");

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```
132         else
133             printf("DRAW...");
134     }
135     else{
136         printf("Bye!");
137     }
138
139
140
141
142
143
144
145
146
147     return 0;
148
149 }
150
151 void menu(){
152     printf("BO BING GAME!\n");
153     printf("Choose one from the followings:\n ");
154     printf("1. Start the game by selecting who will start first\n");
155     printf("2. Exit\n");
156     printf("Option: ");
157 }
158
159 int roll_a_dice(){
160     return 1+(rand()%6);
161 }
162
163 int compute_points(int dice1,int dice2){
164     if(dice1==dice2)
165         return 300;
166     else{
167         if(dice1==1 || dice2==1)
168             return 100;
169         else
170             return 200;
171     }
172 }
173
174
175
176
177
```