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Purpose: Project #2

System Library
#include <iostream>
#include <ctime>
#include <iomanip>
#include <cstdlib>
#include <string>
#include <stdlib.h>
#include <stdio.h>
using namespace std;

User Libraries
none

Global Constants
none

Function Prototypes
void display(string); // intro
void display2(int, int , int, int [], int [], string, bool); //target and rolls
int roll(int, int, int[], int[], int); // displaying rolls
bool cwin(int, int, int, string); // if win or loose
bool again (int, int, char, string); // wants to play again
void swap(int*, int*);
void bubble (int [], int); // bubble sort
void selSort(int[],int); //selection sort
int linSrch(int[],int,int); // linear search
void pArray (int[], int); // to print
int sizeArr(int [], int); //count number array elements
void fillArr(int[], int[], int); //fill array

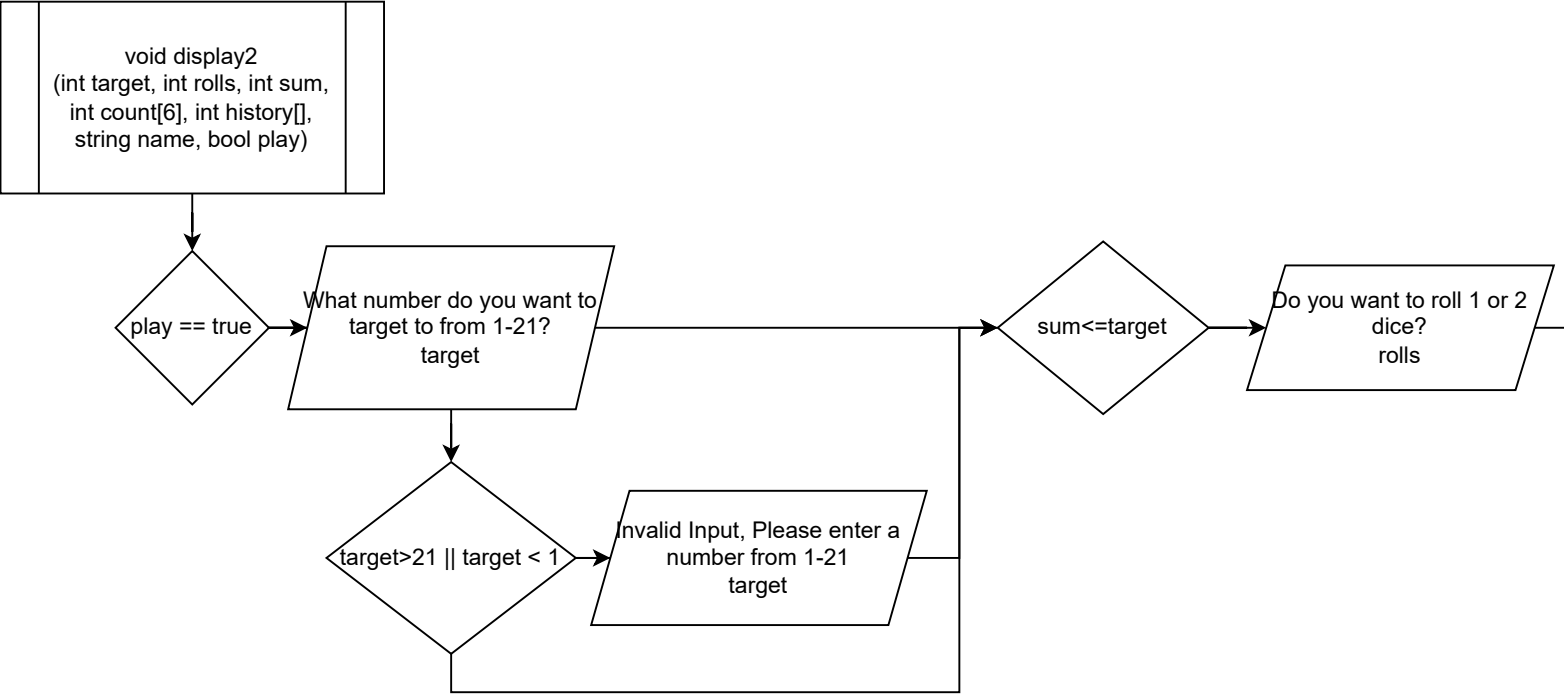
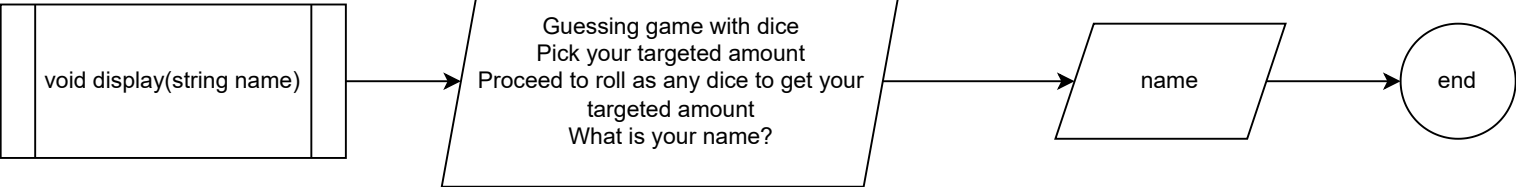
main

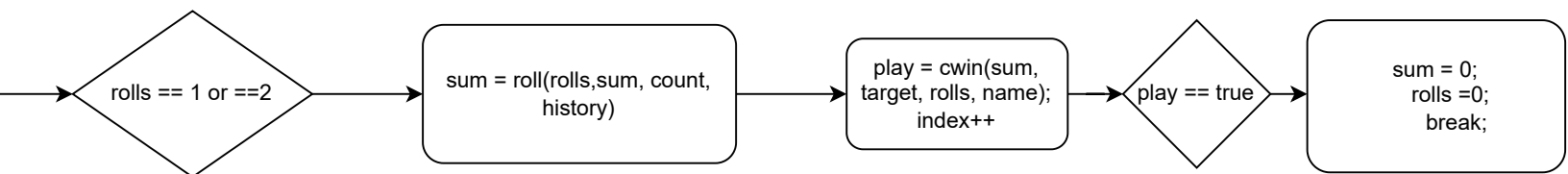
```
int dice1,dice2, rolls,total, diff;  
int sum = 0; // sum of the dices  
char choice; // choice of either yes or no  
char check; // to know if they win or lose  
string name; // players name  
int target; // target number  
int count[6]; // count array  
int history[500];  
int n = sizeof(history) / sizeof(history[0]);  
for (int i = n - 1; i >= 0; i--)  
    history[i] = -1;  
  
bool play = true;
```

```
srand(time(0));  
cout<<endl;  
display(name);  
display2(target, rolls, sum, count, history, name,  
play);
```

```
int arrSize = sizeArr(history, n);  
int bubArr[arrSize];  
int select[arrSize];  
int linear[arrSize];  
fillArr(bubArr, history, arrSize);  
fillArr(select, history, arrSize);  
fillArr(linear, history, arrSize);  
  
bubble(bubArr, arrSize);  
selSort(select,arrSize);  
printf("Bubble sort dice rolls:\n");  
pArray (bubArr, arrSize);  
printf("Selection sort dice rolls:\n");  
pArray (select, arrSize);
```

return 0;





```
int roll(int rolls, int
sum, int count[6],
int history[])
```

```
int dice1,dice2;
```

```
rolls == 1
```

```
rolls--
```

```
dice1 = rand() % 6 +
1
```

```
dice1 == 1
```

```
cout << "=====  
cout << "|      |" << endl;  
cout << "|      • |" << endl;  
cout << "|      |" << endl;  
cout << "=====  
sum += 1;  
count[0]+=1;
```

```
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```

```
dice1 == 2
```

```
cout << "=====  
cout << "| • |" << endl;  
cout << "|      |" << endl;  
cout << "|      • |" << endl;  
cout << "=====  
sum += 2;  
count[1]+=1;
```

```
dice1 == 3
```

```
cout << "=====  
cout << "| • |" << endl;  
cout << "|      • |" << endl;  
cout << "|      • |" << endl;  
cout << "=====  
sum += 3;  
count[2]+=1;
```

```
dice1 == 4
```

```
cout << "=====  
cout << "| • • |" << endl;  
cout << "|      |" << endl;  
cout << "|      • |" << endl;  
cout << "=====  
sum += 4;  
count[3]+=1;
```

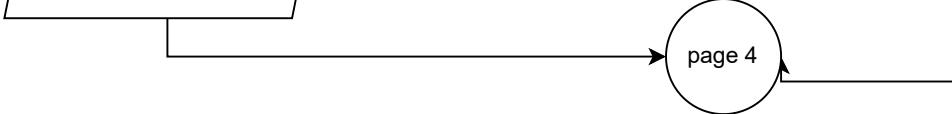
```
dice1 == 5
```

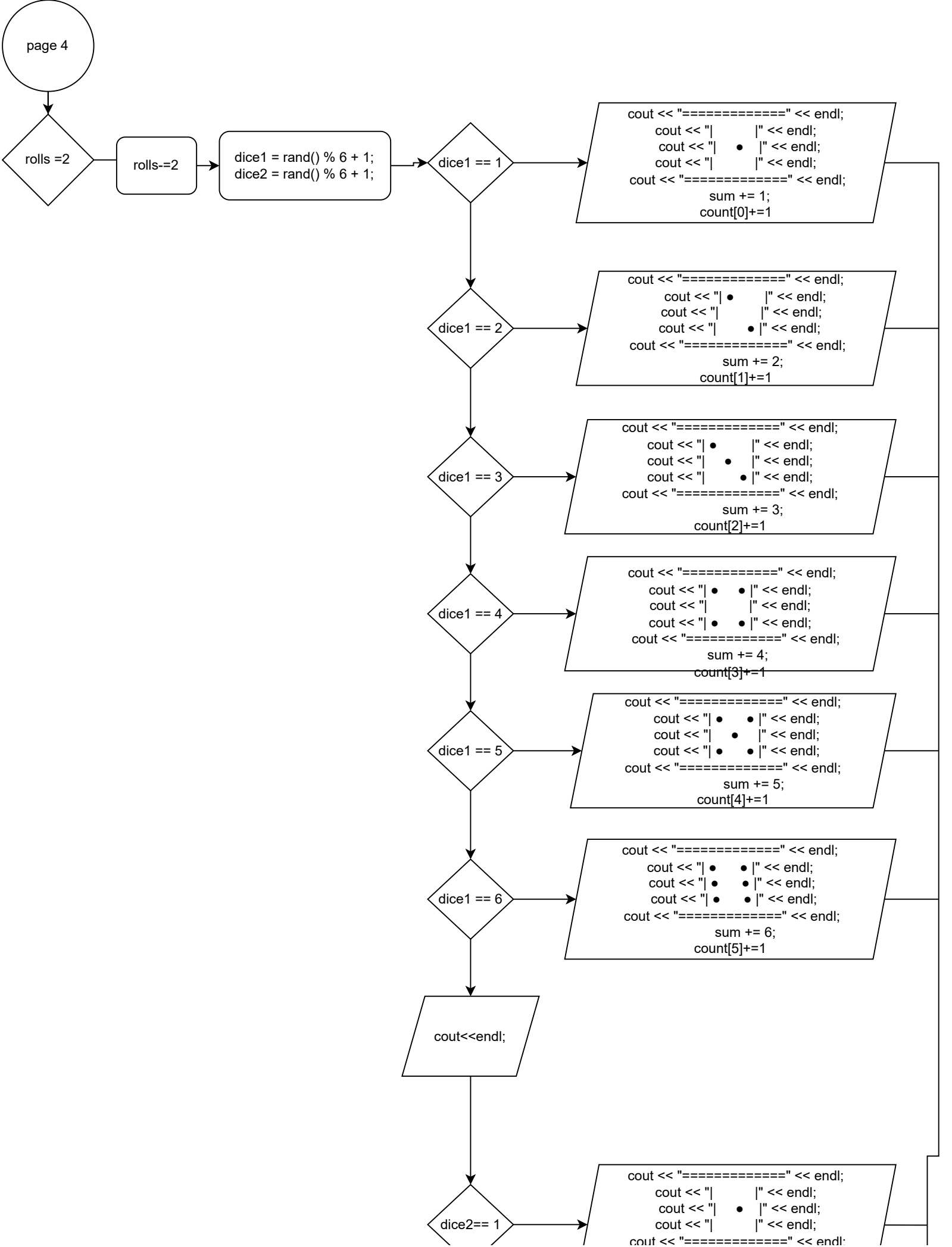
```
cout << "=====  
cout << "| • • |" << endl;  
cout << "|      • |" << endl;  
cout << "|      • |" << endl;  
cout << "=====  
sum += 5;  
count[4]+=1;
```

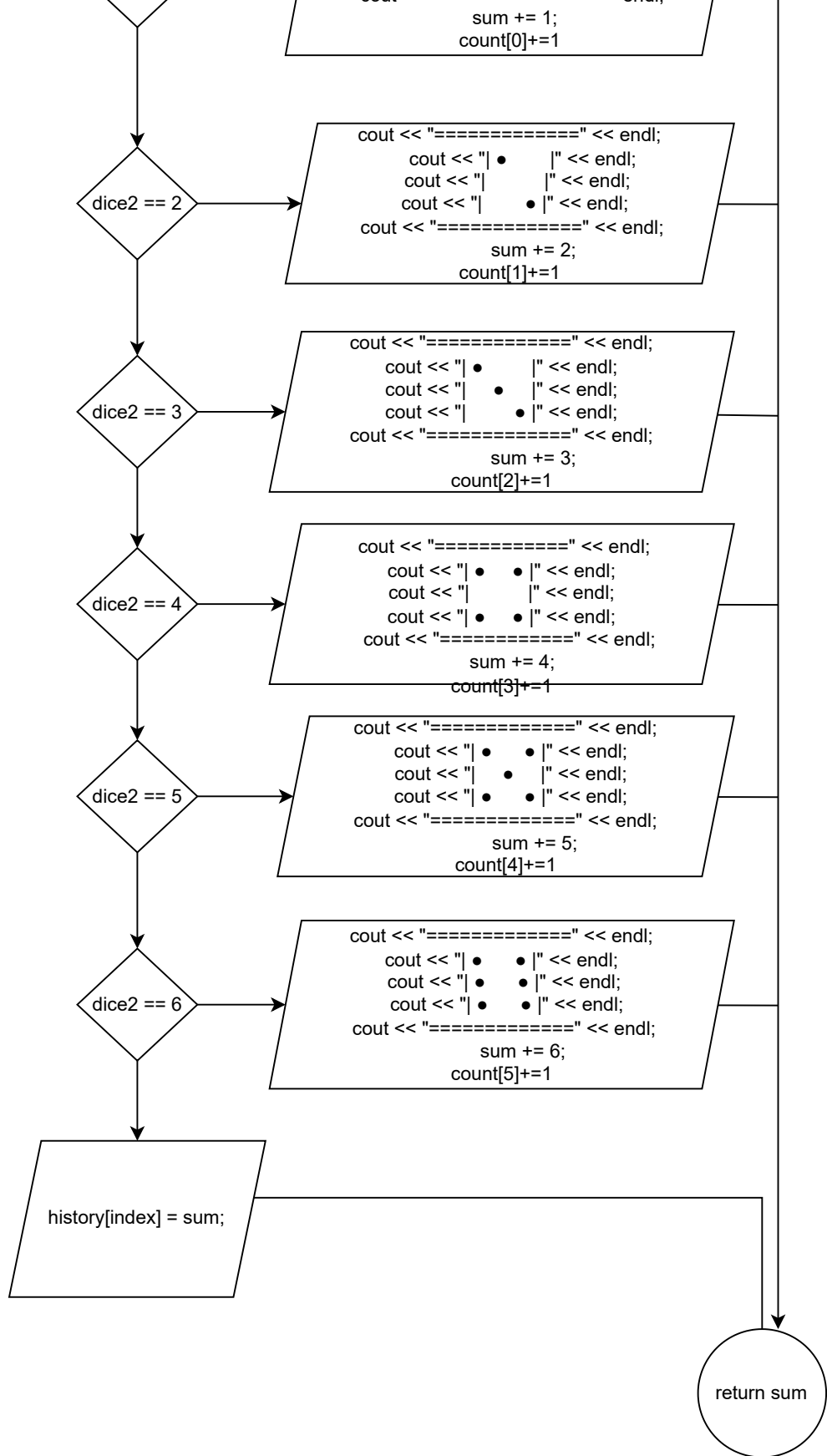
```
dice1 == 6
```

```
cout << "=====  
cout << "| • • |" << endl;  
cout << "|      • |" << endl;  
cout << "|      • |" << endl;  
cout << "=====  
sum += 6;  
count[5]+=1;
```

```
cout<<endl;  
history[index] = sum;
```







bool cwin(int
sum, int target,int
rolls, string
name)

int diff;
char check;
bool end;
diff = target - sum;

You total amount so far is
The difference between what you rolled and
your target number is:

sum==target

check = 'W'

switch(check)

case 'W'

"You won !!! :D

end

sum>target

check = 'L'

case 'L':

"You lost! Sorry :(

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