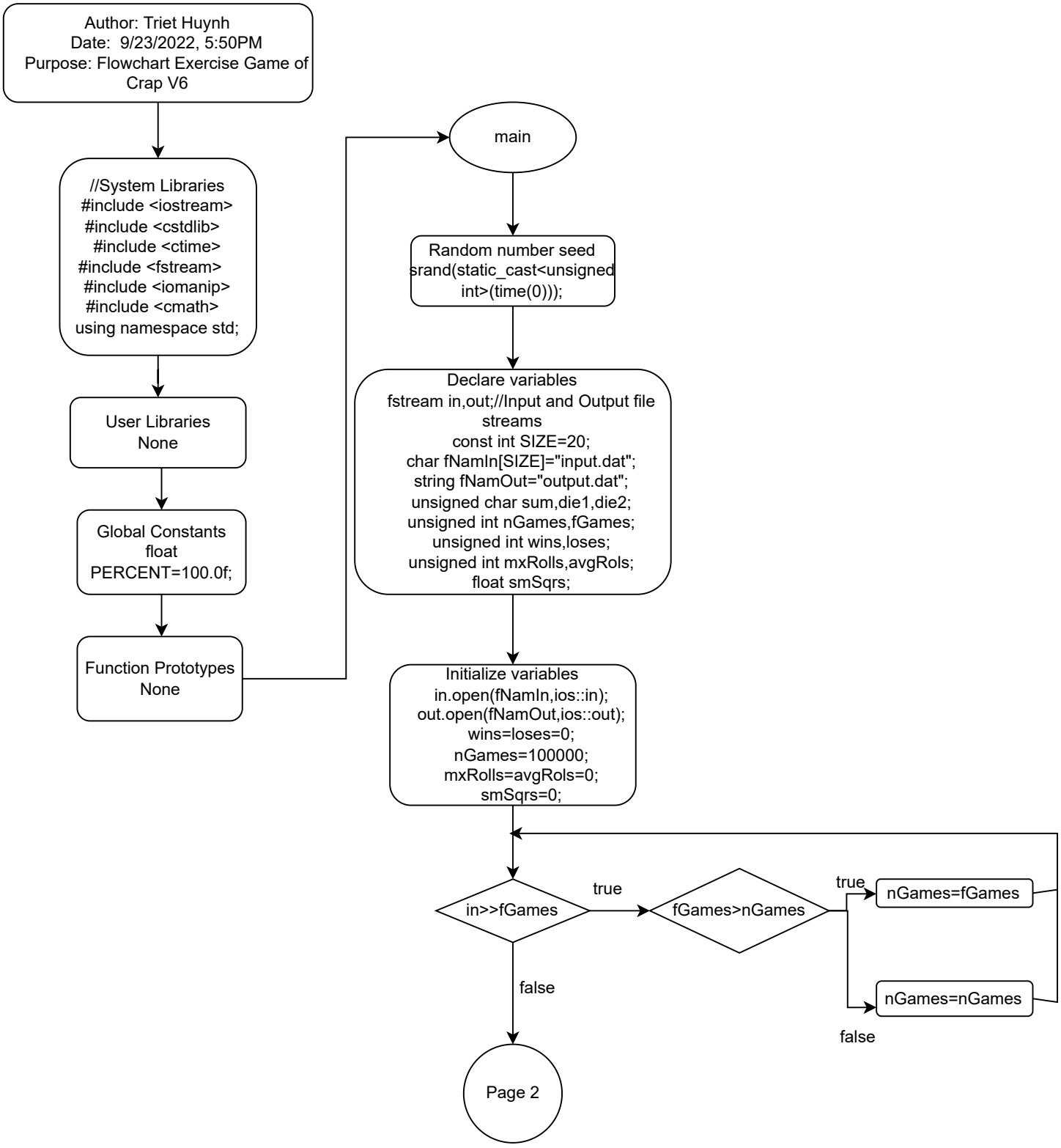
Author: Triet Huynh
Date: 9/23/2022, 5:50PM
Purpose: Flowchart Exercise Game of Crap V6
//System Libraries
#include <iostream>
#include <cstdlib>
#include <ctime>
#include <fstream>
#include <iomanip>
#include <cmath>
using namespace std;
User Libraries
None
Global Constants
float PERCENT=100.0f;
Function Prototypes
None
main
Random number seed
srand(static_cast<unsigned int>(time(0)));
Declare variables
fstream in,out;//Input and Output file streams
const int SIZE=20;
char fNamIn[SIZE]="input.dat";
string fNamOut="output.dat";
unsigned char sum,die1,die2;
unsigned int nGames,fGames;
unsigned int wins,loses;
unsigned int mxRolls,avgRols;
float smSqrs;
Initialize variables
in.open(fNamIn,ios::in);
out.open(fNamOut,ios::out);
wins=loses=0;
nGames=100000;
mxRolls=avgRols=0;
smSqrs=0;
in>>fGames
true
fGames>nGames
true
nGames=fGames
nGames=nGames
false
false
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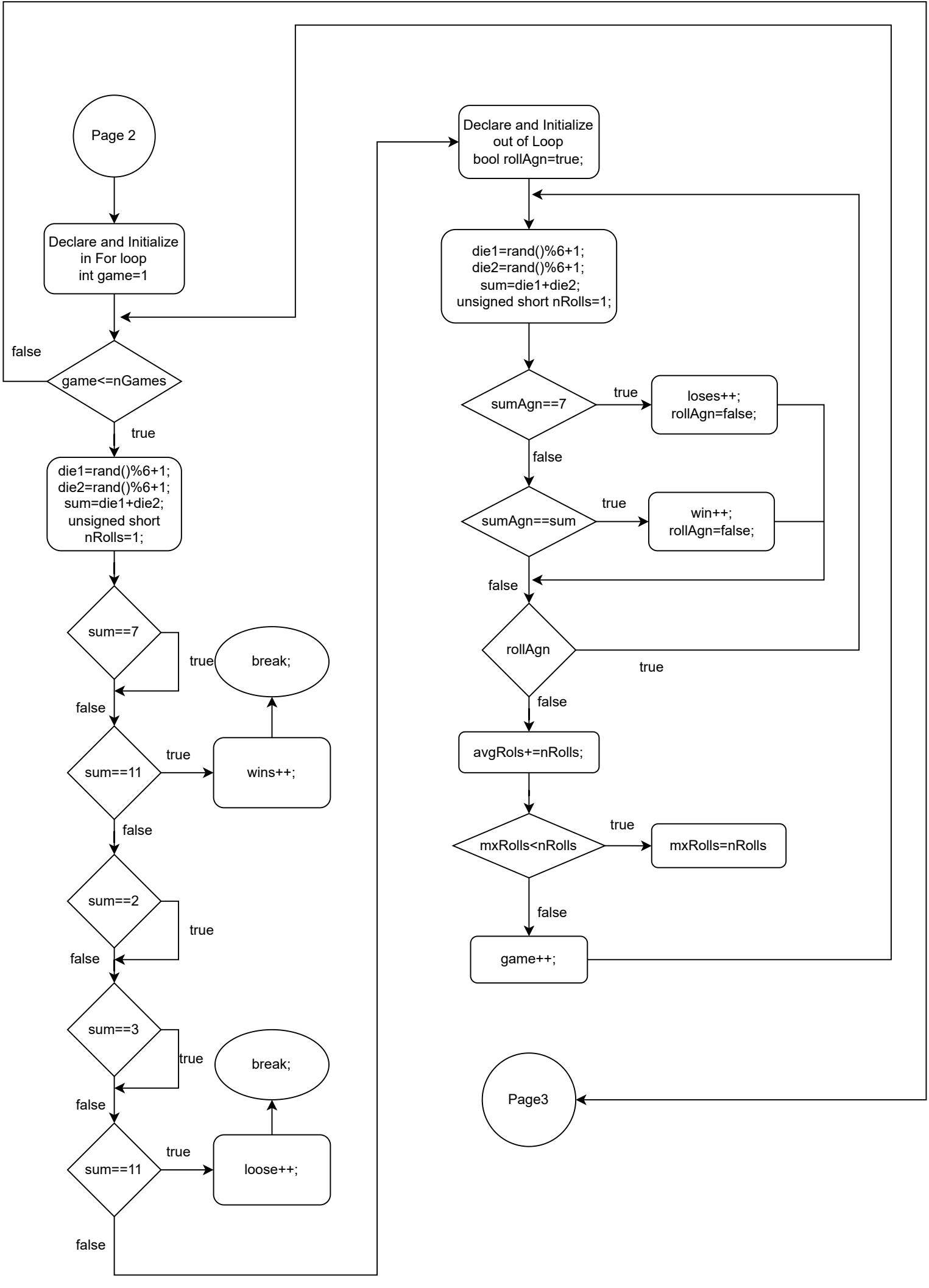
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Declare and Initialize
in For loop
int game=1
false
game<=nGames
true
die1=rand()%6+1;
die2=rand()%6+1;
sum=die1+die2;
unsigned short
nRolls=1;
sum==7
true
break;
false
sum==11
true
wins++;
false
sum==2
true
false
sum==3
true
break;
false
sum==11
true
loose++;
false
Declare and Initialize
out of Loop
bool rollAgn=true;
die1=rand()%6+1;
die2=rand()%6+1;
sum=die1+die2;
unsigned short nRolls=1;
sumAgn==7
true
loses++;
rollAgn=false;
false
sumAgn==sum
true
win++;
rollAgn=false;
false
rollAgn
true
false
avgRols+=nRolls;
mxRolls<nRolls
true
mxRolls=nRolls
false
game++;
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cout<<fixed<<setprecision(3)<<showpoint;
cout<<"Number of Games Played = "<<setw(10)<<nGames<<endl;
cout<<"Number of Games Won = "<<setw(10)<<wins<<endl;
cout<<"Number of Games Lost = "<<setw(10)<<loses<<endl;
cout<<"Number of Games Played = "<<setw(10)<<wins+loses<<endl;
cout<<"Percentage of Games Won = "<<PERCENT*wins/nGames<<"%"<<endl;
cout<<"Percentage of Games Lost = "<<PERCENT*loses/nGames<<"%"<<endl;
cout<<"Maximum number of rolls/game = "<<mxRolls<<endl;
cout<<"Average number of rolls/game = "<<static_cast<float>
(avgRols)/nGames<<endl;
out<<fixed<<setprecision(2)<<showpoint;
out<<"Number of Games Played = "<<setw(10)<<nGames<<endl;
out<<"Number of Games Won = "<<setw(10)<<wins<<endl;
out<<"Number of Games Lost = "<<setw(10)<<loses<<endl;
out<<"Number of Games Played = "<<setw(10)<<wins+loses<<endl;
out<<"Percentage of Games Won = "<<PERCENT*wins/nGames<<"%"<<endl;
out<<"Percentage of Games Lost = "<<PERCENT*loses/nGames<<"%"<<endl;
out<<"Maximum number of rolls/game = "<<mxRolls<<endl;
out<<"Average number of rolls/game = "<<1.0f*avgRols/nGames<<endl;
in.close();
out.close();
return 0;
exit from main