HW: Loops 2

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Multiple choice + T/F

1) a. 5
3) c. postfix
5) a. loop control variable
7) b. posttest
9) c. infinite
11) a. initialization expression
13) a. Sentinel
21) True
22) False
23) False
24) False
25) False
26) True
27) True
28) False → multiply

Find the Errors

```
1) int num1, num2;
   String input;
   char again = 'y';
   Scanner kb = new Scanner(System.in);
   While (again == "Y" || again = "y");
   {System.out.print("Enter a number: ");
    num1 = kb.nextInt();
    System.out.print("Enter another number: ");
    num2= kb.nextInt();
    System.out.println("Their sum is " + (num1 + num2));
    System.out.println("Again?");
    kb.nextLine();
    input= kb.nextLine();
    again= input.charAt(0);
```

3) int choice, num1, num2;
Scanner kb = new Scanner(System.in);
do
{ System.out.print("Enter num1: ");
num1 = kb.nextInt();
System.out.print("Enter num2: ");
num2 = kb.nextInt();
System.out.println("Sum is: " + (num1 + num2));
System.out.println("Again?");
System.out.print("1=yes, 2=no");
Choice = kb.nextInt;
} while (choice == 1);

Algorithmic Workbench

1) int product = 0;
while (product < 100)
{ int choice;
Scanner kb = new Scanner(System.in);
System.out.print("Enter a num: ");
choice = kb.nextInt;
product += (choice * 10);
}

7) Scanner kb = new Scanner(System.in);
int x;
do
{
System.out.print("Enter a num");
x = kb.nextInt();
} while (x > 0);

9)
```
for(int i=0; i<50; i++)
{
  System.out.println("count is " + i);
}
```

11)
```
int input = 0;
while(input != 0 && input < 5)
{
  System.out.print("Enter # in range 1-4 ");
  Scanner kb = new Scanner(System.in);
  input = kb.nextInt();
}
```

13)
```
for(int i = 0; i < 7; i++)
{
  for(int j = 1; j <= 7; j++)
  {
    System.out.print("* ");
  }
  System.out.print("\n");
}
```

Short Answer

1) Prefix is before the variable, and increments the value before vs Postfix is after the variable, and increments the value after use.

3) Pretest loops enter the loop after checking a condition, while posttes loops enter the loop first, then check the condition.

5) The while loop is a pretest loop, while the do-while loop is a posttest loop

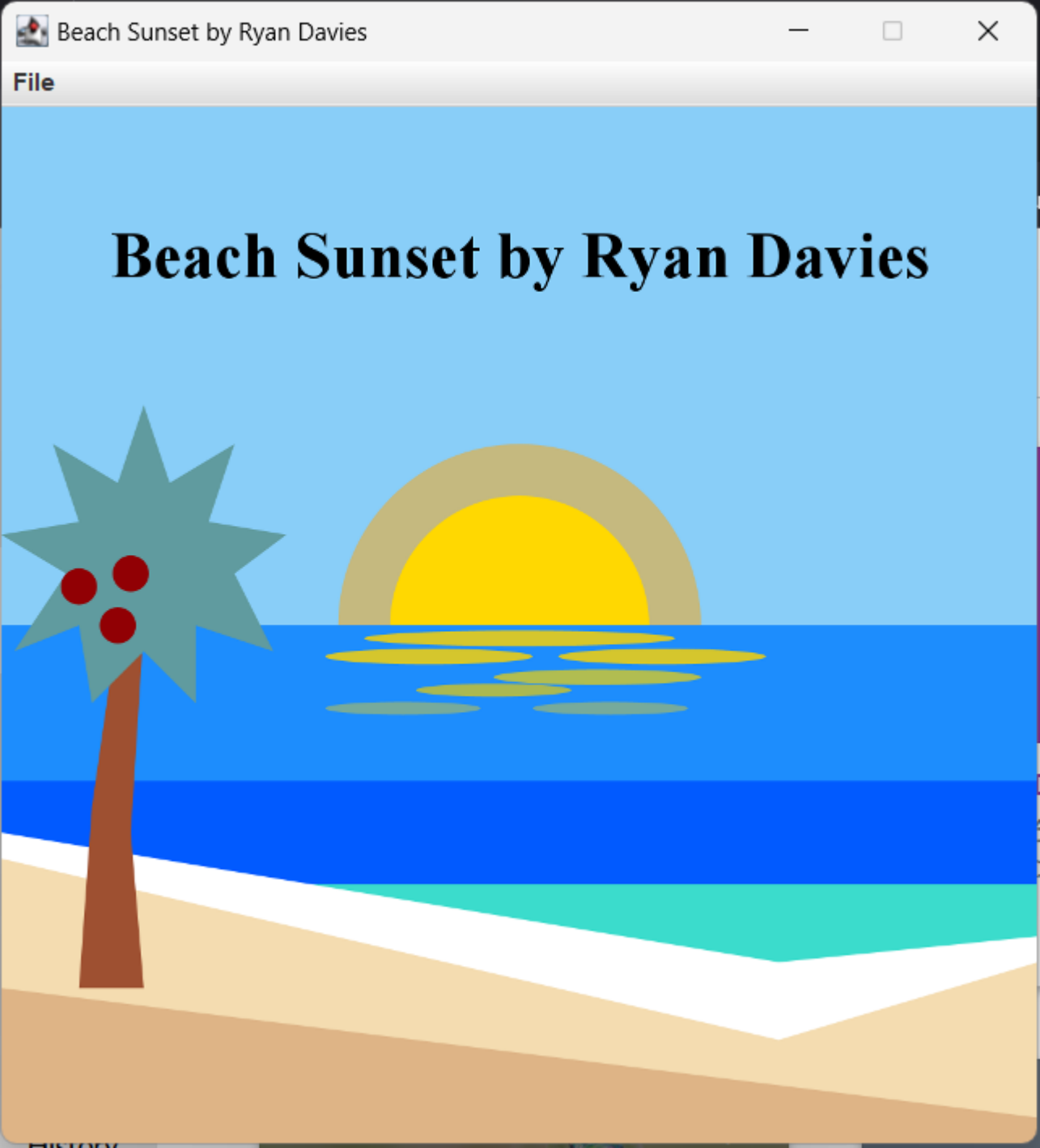
7) You should use the do-while loop.

9) You must initialize an accumulator in order to keep track of the correct number of iterations.

11) Any loop that runs a set number of times requires an accumulator.

13) Sentinels are useful to detect a certain value or to be used as user input to terminate a while loop.

15) Nested loops can be used to perform the same task a variable number of times.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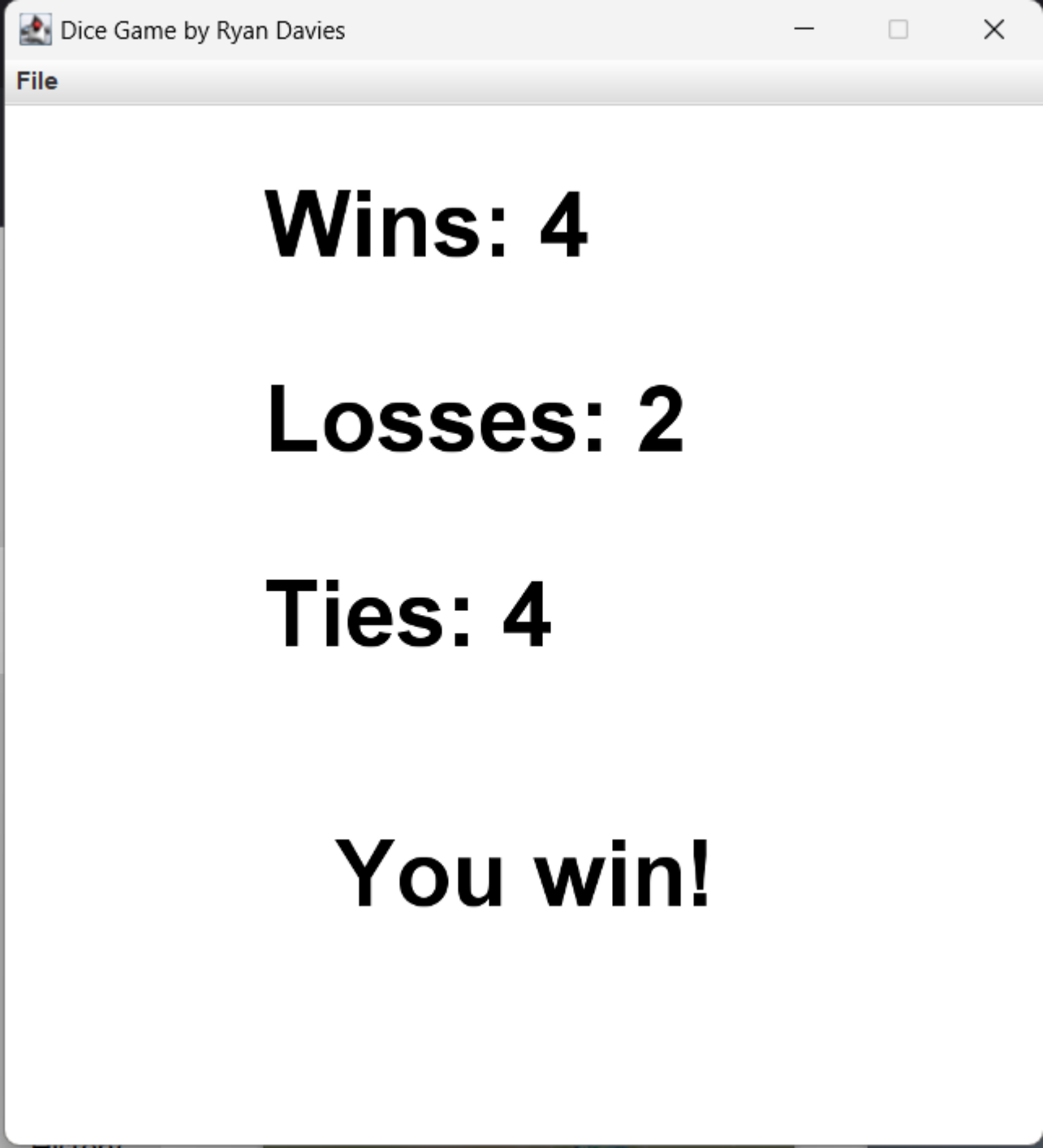
Dice Game by Ryan Davies
File
Wins: 4
Losses: 2
Ties: 4
You win!