Project 1

<Yahtzee Game>

CIS 5 – 42480

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1. **Introduction**

Yahtzee is a fun dice game in which one player can play alone or many players can play together. This program allows player to play the game and record the score. The player also chooses to quit the game anytime they want.

1. **Game and rules**

Players have 5 dices to roll. Player with highest score wins. Players try to fulfill all 13 fields:

Score

1. Aces (#of one's) sum of dices with the number 1

2. Twos (# of two's) sum of dices with the number 2

3. Threes (# of three's sum of dices with the number 3)

4. Fours (# of four's) sum of dices with the number 4

5. Fives (# of five's) sum of dices with the number 5

6. Sixes (# of six's) sum of dices with the number 6

7. 3 of a kind sum of all dice

8. 4 of a kind sum of all dice

9. Full house score is 25

10.Small straight (sequence of 4) score is 30

11.Large straight (sequence of 5)- score is 40

12.Yahtzee (all five dice the same) score is 50

13.Chance (any combination) sum of all dice

Each player has 3 rolls when it’s their turn. After 3 rolls, the turns goes to next player.

1. **Summary of code**

Lines: 260

Variables: 20

|  |  |
| --- | --- |
| **Topic** | **Where Line #''s** |
| cout | 37,40,44,62,63,66,67 70,73,79,84,99-112,177, 183,206,212,220,224,230 247,253,275,287 |
|
|
| libraries | 9, 10, 11, 12 |
| variables/literals | 23,32-34,52-55,69,78,119,121,161-165,190-194,219, 224,229,234-237,260-262, |
|
| Identifiers | 23, |
| Integers | 23,32,34,52-55,78,119,121,161-162, 164-165,190-191,193-194,219,224,229,234-237,260-262 |
| Characters | 33 |
| Strings |  |
| Floats No Doubles |  |
| Bools | 115 |
| Sizeof \*\*\*\*\* |  |
| Variables 7 characters or less | 23,32-34,52-55,69,78,119,121,161-165,190-194,219, 224,229,234-237,260-262, |
|
| Scope \*\*\*\*\* No Global Variables |  |
| Arithmetic operators | 44,121,129,136,143,150,157 282-283 |
| Comments 20%+ | 52-55,78,161,164-165,169-170, 173,175,180,190,193,194,198,199, 202,204,209,234,236,237,240,241, 250,260-262,266,267,270,272 |
| Named Constants |  |
| Programming Style \*\*\*\*\* Emulate |  |
| cin | 38,41,64,74,81,113,184,213,254, |
| Math Expression |  |
| Mixing data types \*\*\*\* |  |
| Overflow/Underflow \*\*\*\* |  |
| Type Casting |  |
| Multiple assignment \*\*\*\*\* |  |
| Formatting output |  |
| Strings |  |
| Math Library |  |
| Hand tracing \*\*\*\*\*\* |  |
| Relational Operators |  |
| if | 91,96,182,211,252 |
| If-else | 269-271 |
| Nesting | 36-39 |
| If-else-if | 75-77,82-87,201-203,242-244 |
| Flags \*\*\*\*\* |  |
| Logical operators | 65,80,82,116,174,182,203,211,244,252 |
| Validating user input | 37-41,183,212,253 |
| Conditional Operator |  |
| Switch | 117 |
| Increment/Decrement | 24,59,68,72,84,168,197,239,265, |
| While | 65,116 |
| Do-while |  |
| For loop | 24,59,68,72,84,168,197,239,265 |
| Files input/output both |  |