

ETÉRNITÉ

私のそばに永遠にいてください



*YOU ARE IN AN EMPTY ROOM,
TIED TO A CHAIR WHEN YOU WOKE UP.
YOU SOMEHOW MANAGED TO REMOVE THE ROPES,
BUT THE DOOR IS LOCKED.*

*TO ESCAPE, YOU NEED TO FIGURE OUT THE TRUTH.
THE DIFFICULTY LEVEL YOU CHOOSE WILL DETERMINE
YOUR FINAL FATE.*

ETERNITY

Please Stay By My Side Forever



INTRODUCTION

AS THE PLAYER, YOU WILL DECIDE ON BLAINE'S FATE WITH ANN BASED ON THE LEVEL OF DIFFICULTY YOU CHOOSE. THE GAME IS PLAYED ON OUR SPECIAL GAME BOX – YOUR SUITCASE. THERE ARE BUTTONS AND SWITCHES FOR YOU TO ENTER ANSWERS AT EACH STAGE OF THE GAME. THEY ARE ALL BINARY BASED PUZZLES AND SOME MAY INCLUDE LOGIC GATES AND OTHER FUNCTIONS OF ARITHMETIC LOGIC UNIT (ALU).

DO NOT WORRY IF YOU FIND THESE COMPUTING CONCEPTS UNFAMILIAR. WE HAVE PREPARED A SHORT INTRODUCTION TO THESE CONCEPTS IN THE BOOKLET AND WE WILL GUIDE YOU ALONG THE WAY.

GOOD LUCK AND HAVE FUN!



ABSTRACTION PUZZLES

BASED ON STORYLINE, CHARACTER'S EMOTIONS, WISHES, AND DESIRES. YOU MIGHT REQUIRE CLUES FROM OTHER PUZZLES IN THIS TYPE OF PUZZLES.

ENTER-A-VALUE PUZZLES

E.G. ENTER DATE, ENTER A NUMBER REPRESENTED IN BINARY FORM FOR DATE FORMAT, WE FOLLOW "DD/MM/YY". NUMBERS IN THE PUZZLES ARE WRITTEN IN DECIMAL FORM (BASE 10), YOU WILL NEED TO CONVERT THEM TO BINARY BEFORE ENTERING THE VALUE/S.

LITERARY PUZZLES

AS THE NAME SUGGESTS, THE ANSWERS CONCERN THE STYLE OF WRITING AND THE LITERARY DEVICES USED.

SPATIAL PUZZLES

PUZZLES THAT ARE BASED ON THE POSITION OF THE CHARACTERS IN THEIR RELATIONSHIP OR THE ORDER OF EVENTS AND ETC.

ALU PUZZLES

ALU STANDS FOR ARITHMATIC LOGIC UNIT. DON'T WORRY ABOUT THIS, WE WILL INTRODUCE THE IDEAS TO YOU LATER

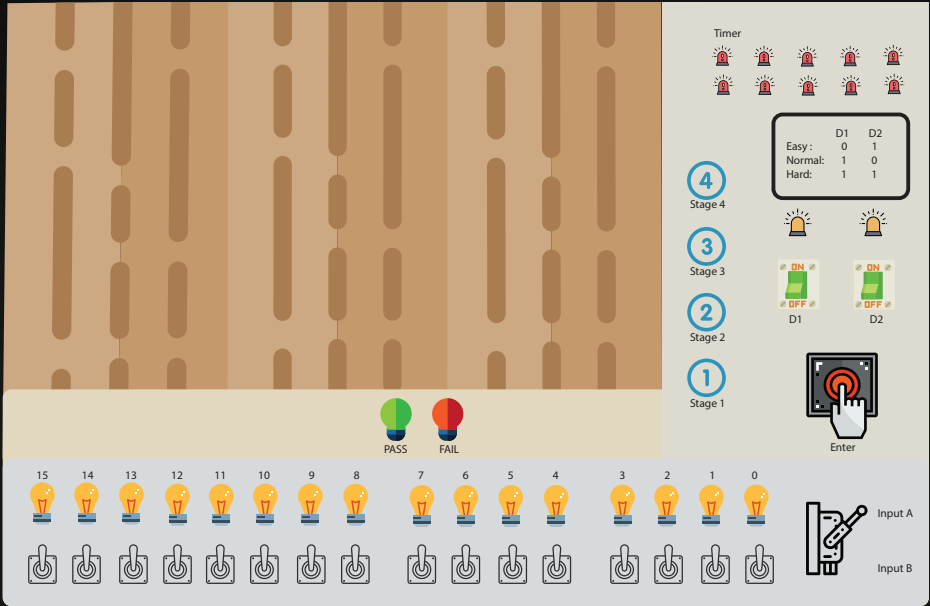
THERE ARE 3 SUBCATEGORIES OF PUZZLE UNDER THIS:

LOGIC GATE PUZZLES

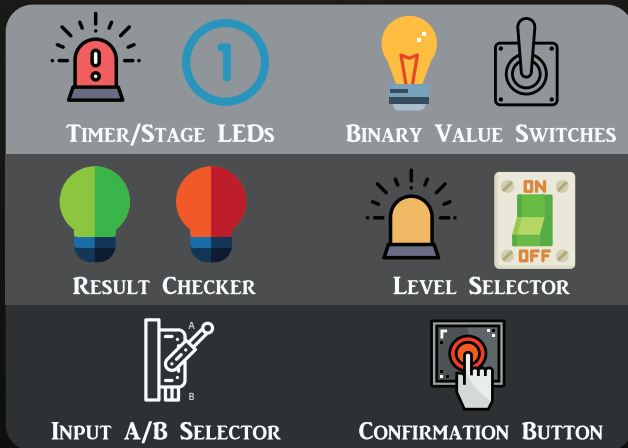
BOOLEAN PUZZLES

ARITHMETIC PUZZLES

GAME INSTRUCTIONS



SUITCASE USER INTERFACE



LEGEND



YOU NEED TO PICK THE CORRESPONDING STORY BOOKLET FOR THE LEVEL YOU CHOOSE AND EACH LEVEL HAS A SPECIFIC TIME LIMIT.

EASY: 6 MIN 4 PUZZLES

MEDIUM: 8 MIN 7 PUZZLES

HARD: 10 MIN 11 PUZZLES

FOR EASY PUZZLES, ENTER THE ANSWER FROM 0TH TO 3RD BIT.

FOR MEDIUM PUZZLES, 4TH TO 7TH BIT.

FOR HARD PUZZLES, 8TH TO 15TH BIT.

(UNLESS STATED OTHERWISE)

HOW DO I KNOW IF MY ANSWER IS CORRECT?

AFTER ENTERING THE INPUT/S AND PRESSING THE ENTER BUTTON, IF YOUR ANSWER IS CORRECT, THE 'PASS LED' WILL LIGHT UP AND THE STAGE INDICATOR WILL PROCEED.

ELSE, THE 'FAIL LED' WILL LIGHT UP.

NOTE:

1. ENTER THE BINARY SEQUENCE ANSWER BEFORE THE TIME RUNS OUT!
2. USE A<->B TOGGLE SWITCH TO TOGGLE BETWEEN A AND B INPUT.
3. YOU HAVE UNLIMITED ATTEMPTS WITHIN THE TIME-LIMIT.
4. ENTER THE ANSWER FOR INPUT A AND INPUT B VIA THE A<->B TOGGLE SWITCH.
5. '1' IS ANALOGOUS TO TRUTH, AND '0' IS ANALOGOUS TO FALSE.
6. ONE INPUT HINT => ENTER ANSWER IN A ONLY.
7. TWO INPUT HINT => ENTER ANSWER IN A & B.
8. IF THERE ARE ALU LOGIC OR COMPARATOR FUNCTIONS, A WILL ALWAYS BE THE VALUE AND B IS THE AMOUNT TO BE CARRIED OUT BY. E.G. A SHIFT BY B NUMBER OF BITS, $A \gg B$, $A \leq B$.



| INDEX 3 | INDEX 2 | INDEX 1 | INDEX 0 |
|-------------------------------|---------|---------|--------------------------------|
| 1 | 1 | 0 | 1 |
| MOST SIGNIFICANT BIT (MSB) | | | LEAST SIGNIFICANT BIT (LSB) |

$$\begin{aligned} 1101 &= 1 \cdot 2^3 + 1 \cdot 2^2 + 0 \cdot 2^1 + 1 \cdot 2^0 \\ &= 8 + 4 + 0 + 1 \\ &= 13 = D \end{aligned}$$

* 4 BITS = 1 BYTE

| Deci <-> Hexa | |
|---------------|---|
| 0 | 0 |
| 1 | 1 |
| 2 | 2 |
| . | . |
| . | . |
| 9 | 9 |
| 10 | A |
| 11 | B |
| 12 | C |
| 13 | D |
| 14 | E |
| 15 | F |

LOGIC GATES

A LOGIC GATE TAKES IN TWO BINARY INPUTS AND RETURNS A BINARY OUTPUT.

IN THIS GAME, IF INPUTS ARE MORE THAN 1 BIT (EG. '10' AND '11'), THE OUTPUT SHOULD BE COMPARED BITWISE BASED ON THE BIT'S INDICES. (EG. '10' AND '11' GIVES AN OUTPUT '01')

INPUTS LOGIC GATE OUTPUTS

| A | B | AND | NAND | OR | NOR | XOR |
|---|---|-----|------|----|-----|-----|
| 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 0 | 1 | 0 | 0 |

'NAND' GATE MEANS NOT 'AND'

'NOR' GATE MEANS NOT 'OR'

'XOR' GATE MEANS TO EXCLUSIVE 'OR'

ALU LOGIC

AN ARITHMETIC LOGIC UNIT (ALU) PERFORMS OPERATIONS ON A & B VALUES. PUZZLES WHERE ALU FUNCTIONS ARE STATED, AN OPERATION WILL BE PERFORMED ON THE INPUTS, BEFORE CHECKING FOR THE ANSWER.

ARITHMATIC OPERATORS:

ADD

$A + B$ WILL BE PERFORMED.

SUBTRACT

$A - B$ WILL BE PERFORMED.

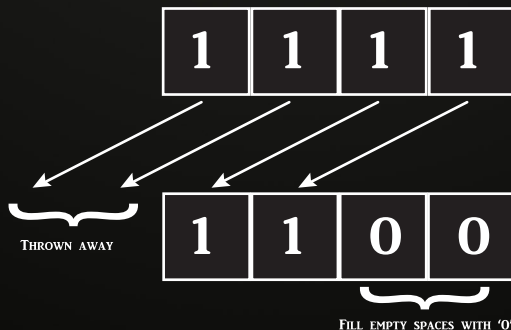
MULTIPLY

$A * B$ WILL BE PERFORMED.

SHIFTERS:

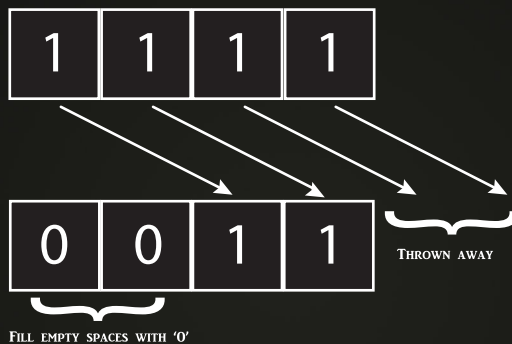
SHIFT LEFT

SHIFT BINARY SEQUENCE OF 'A' THE THE DECIMAL VALUE OF B TO THE LEFT. EG. IN THE CASE OF $A = 1111$, $B = 0010 = 2$,



SHIFT RIGHT

SHIFT BINARY SEQUENCE OF 'A' THE THE DECIMAL VALUE OF B TO THE RIGHT. EG. IN THE CASE OF $A = 1111$, $B = 0010 = 2$,



WHAT IS AN OVERFLOW?

IN BINARY, ADDITION OF 1 AND 1 ON THE SAME BIT WILL LEAD TO A CARRY FORWARD TO THE NEXT BIT.

IF THIS OCCURS ON THE MOST SIGNIFICANT BIT, THE BINARY SEQUENCE WILL NOT BE ABLE TO CONTAIN THE VALUE.

HENCE, AN OVERFLOW OCCURS.



THIS GAME CAN BE SOLVED VERY INTUITIVELY. SOMETIMES, THERE'S NO NEED FOR YOU TO APPLY ARITHMATIC LOGICS ON YOUR ANSWERS.. FOLLOW YOUR HEART! DON'T THINK TOO MUCH!

USE YOUR EMOTION TO FEEL THE CHARACTERS AND THE ANSWER WILL FLOW TO YOU.

HAVE FUN!

AND THANK YOU FOR READING THUS FAR.

THE END

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