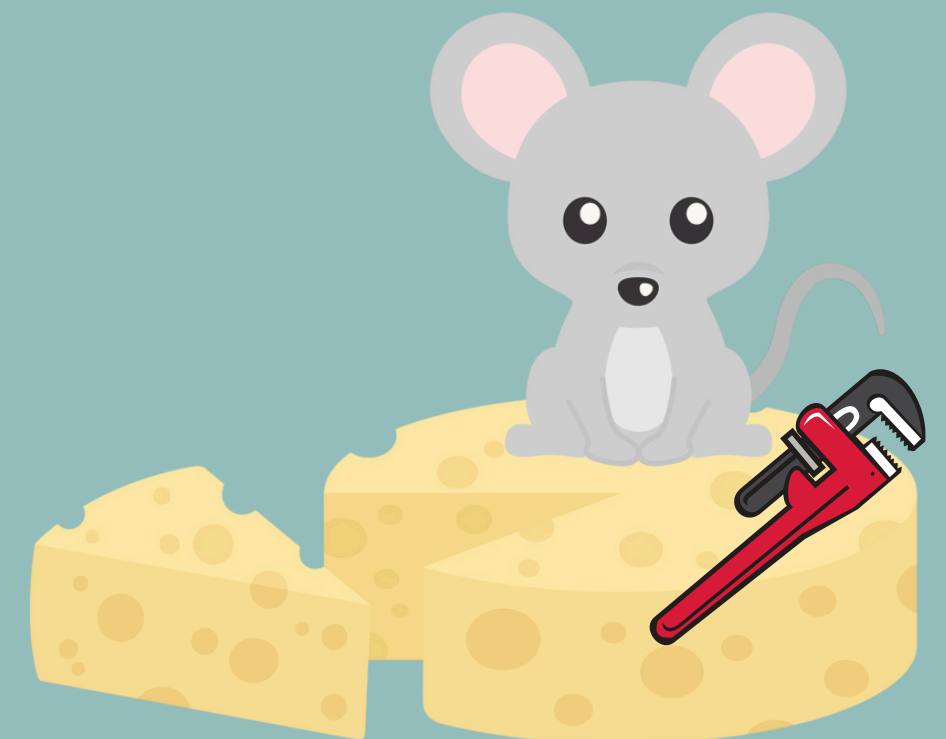


BOMB MOUSE PLUMBER MAZE

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ABOUT MOUSE PLUMBER

FOR OUR BOMB PROJECT WE CREATED A MOUSE PLUMBER NAMED : PABLO" WHO HAS FOUND HIMSELF TRAPPED IN A PIPE SYSTEM. HE MUST OVERCOME CHALLENGES TO ESCAPE HIS FATE OR SUCCUMB TO A FIERY EXPLOSION.

HE WILL HAVE TO PASS THROUGH 4 GATES AND SOLVE THE PUZZLES TO OPEN THEM SO HE CAN GET TO THE END AND DEFUSE THE BOMB.
IF HE FAILS HE WILL BE STUCK IN THE PIPE SYSTEM AND CAUGHT IN THE EXPLOSION OF THE BOMB.

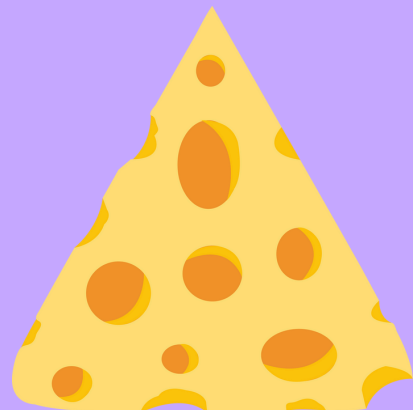


PURPOSE AND OBJECTIVE (HOW TO PLAY)

THE GOAL IS TO HELP MOUSE PLUMBER ESCAPE THE PIPES BEFORE THEY EXPLODE. ALONG THE
PATH
MOUSE PLUMBER COMES ACROSS GATES THAT REQUIRE YOUR ASSISTANCE TO SOLVE. IF ALL THE
GATES
ARE OPEN BEFORE TIME RUNS OUT THEN YOU WIN.

THE PLAYERS ARE EXPECTED TO USE THE INPUTS TO ANSWER THE RIDDLES AND QUESTIONS TO
PASS THROUGH EACH GATE AND GET PABLO TO THE END OF THE MAP WITHOUT THE BOMB
EXPLODING.

IF QUESTIONS ARE ANSWERED CORRECTLY THE PLAYERS WILL BE ABLE TO MOVE ON AND PABLO
WOULD PASS THAT GATE BUT IF THE QUESTIONS ARE ANSWERED INCORRECTLY THE PLAYERS
STRIKES WILL GO DOWN. YOU WILL ONLY HAVE 5 STRIKES.



CREATION

HOW DID WE DESIGN THE GAME TO CREATE TENSION AND URGENCY FOR THE PLAYER?

WE CREATED A GAME THAT MAKES THE USERS FEEL THAT THEY MUST COMPLETE PUZZLES TO MAKE IT THROUGH THE PIPES WHILE ALSO NOT MAKE TOO MANY MISTAKES.

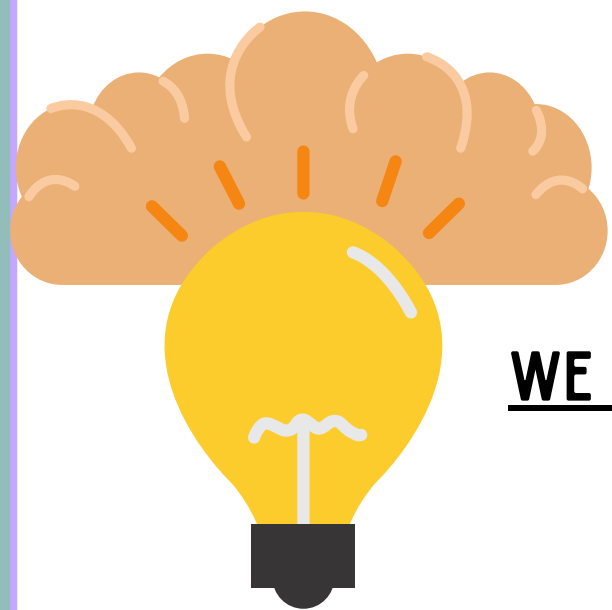
HOW DID WE HANDLE TIMING, STRIKES, AND GAME LOGIC?

THE TIMER IS SET TO 5 MINUTES AND THE PLAYERS WILL LOSE STRIKES AFTER THEY INPUT INCORRECT ANSWERS.

HOW DID WE BALANCE DIFFICULTY AND FAIRNESS IN OUR PUZZLES?

WE TRIED TO USE PUZZLES THAT ARE TRICKY BUT NOT IMPOSSIBLE TO SOLVE DURING THE TIME GIVEN. THE QUESTIONS ARE LOGIC BASED AND PROBLEM SOLVING OR TRIVIA QUESTIONS.

EACH PUZZLE'S DIFFICULTY IS SET TO INCREASE AS THE USER PROGRESSES TO THE END.



HOW?

HOW DOES THE GAME REACT TO CORRECT VS. INCORRECT ACTIONS?

A MESSAGE POPS ON THE LEFT HAND SIDE OF SCREEN AND REMOVES ONE STRIKE WHEN WRONG. IF CORRECT USER MOVES ON TO NEXT PUZZLE.

DID WE ADD SOUND, COLOR CHANGES, OR ANIMATIONS — AND HOW DO THOSE ENHANCE THE EXPERIENCE?

WE HAD PLANS TO ADD THESE THINGS BUT RAN INTO TROUBLE ALONG THE WAY



WHAT WOULD WE DO DIFFERENT?

SOMETHING THAT WE COULD DO DIFFERENT WOULD BE TO ADD SOME MORE IMAGES AND ANIMATIONS TO ADD AND SHOW PABLO NAVIGATING THROUGH PIPES.

WE COULD ALSO ADD MORE POSSIBILITIES AND OPTIONS, LIKE LEFT OR RIGHT DOWN VARIOUS PIPE PATHS, LEADING TO DIFFERENT PUZZLES.

WE WOULD HAVE LIKED TO ADD SOUNDS AND MORE RANDOMIZED QUESTIONS TO MAKE THE GAME PLAYABLE MULTIPLE TIMES.



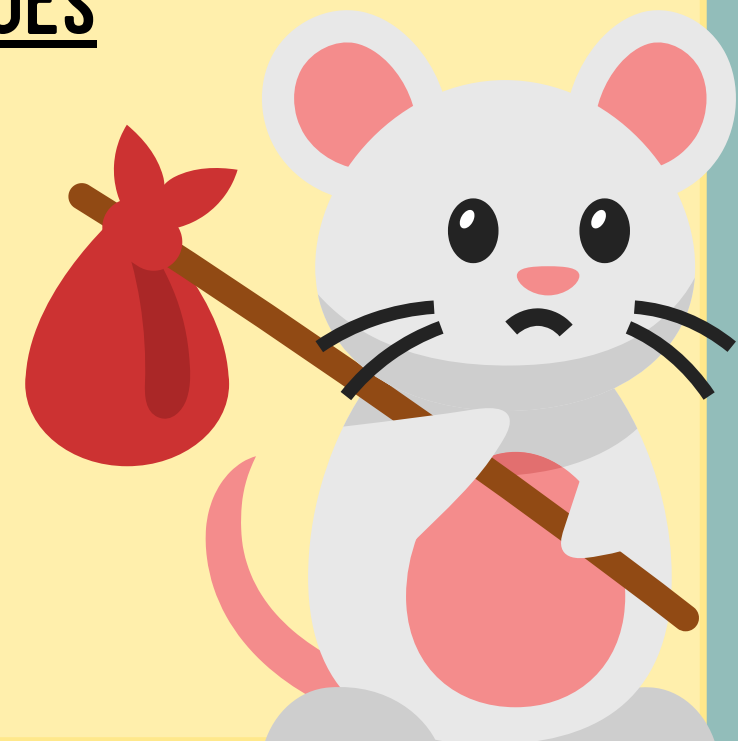
CHALLENGES

WHAT'S ONE CHALLENGE IN MAKING THE GAME INTUITIVE WHILE STILL DIFFICULT?

MAKING IT SO THAT THE GAME COULD BE REPLAYED AND ADD A SENSE OF UNPREDICTABILITY OR RANDOMNESS TO IT ALL.

WHAT WAS THE HARDEST TECHNICAL FEATURE TO IMPLEMENT (E.G., TOGGLE DETECTION, COUNTDOWN, PUZZLE LOGIC)?

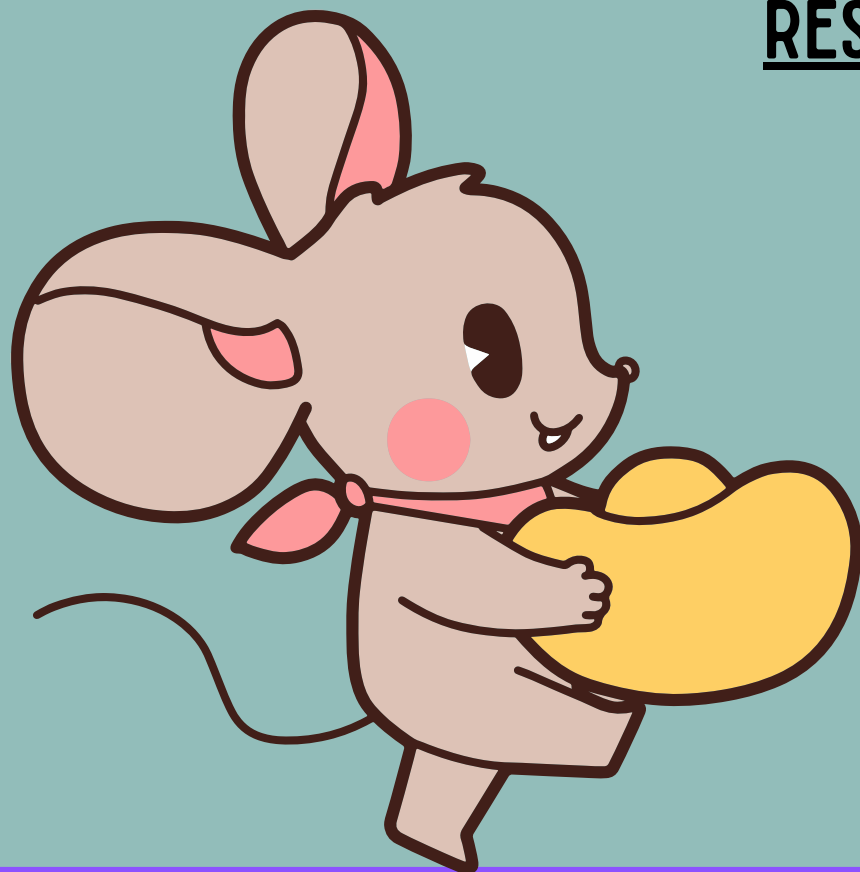
FOR US OUR TOGGLES WERE THE MOST CHALLENGING AND WE HAD ISSUES HAVING THEM WORK WITH THE GUI AND PUZZLE ANSWERS.





PROBLEM SOLVING

ONE MAJOR ISSUE INVOLVED MANAGING GAME FLOW BETWEEN PHASES; AT TIMES, THE GAME WOULD CRASH OR GET STUCK DUE TO INCORRECT PHASE INDEXING. WE ALSO FACED TIMING BUGS WITH THE COUNTDOWN AND HAD TO CAREFULLY COORDINATE GUI UPDATES AND HARDWARE INPUTS TO AVOID GLITCHES. BY WORKING TOGETHER, TESTING REGULARLY, AND DEBUGGING LINE BY LINE, WE WERE ABLE TO RESOLVE LOGIC ERRORS, AVOID CIRCULAR IMPORTS, AND ENSURE ALL GAME PHASES TRANSITIONED SMOOTHLY.



WHAT WENT WELL ?

WHAT WENT WELL FOR US IS AS FOLLOWS.

-CREATING THE CONCEPT AND PUZZLES

-ADDING STRIKES TO MISTAKES IN THE GAME

-CREATING A FUNCTIONAL START SCREEN

-COLLABORATION AMONGST GROUP MEMBERS



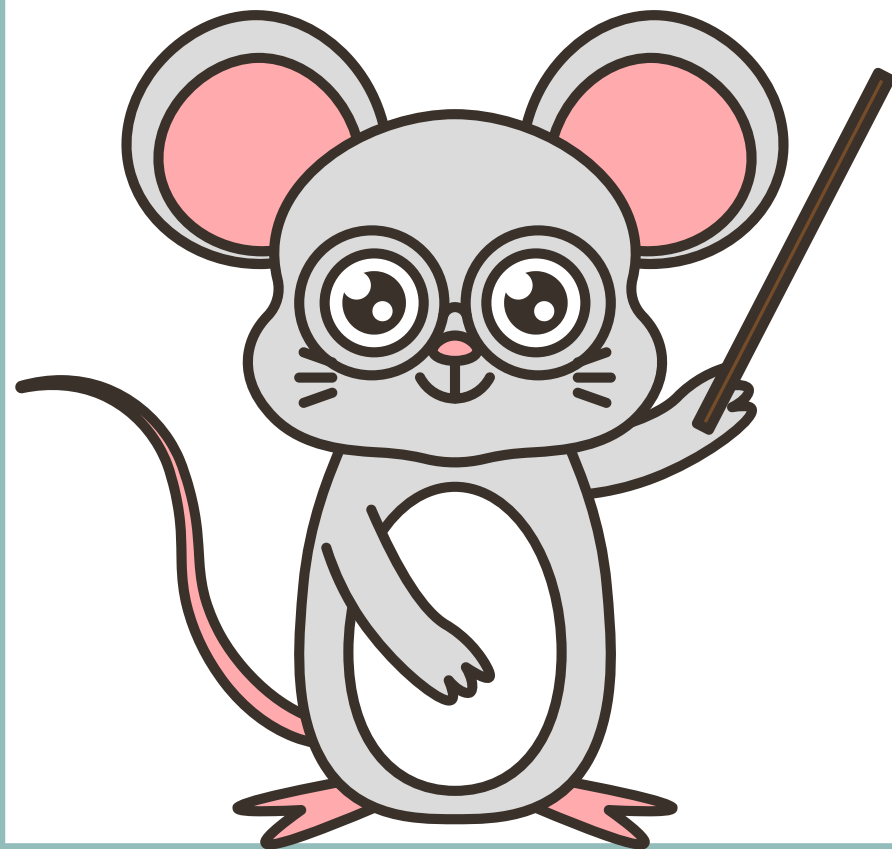
WHAT WE LEARNED

WE LEARNED HOW TO BETTER IMPLEMENT GUIS

ADDING IMAGES TO GUI'S

HOW TO USE CODING AND APPLY IT TO A TECHNICAL AND PRACTICAL LEVEL

HOW TROUBLESHOOT AND MAKE IT SO VARIOUS FILES WORK TOGETHER



IF WE HAD MORE TIME

ADD MORE PUZZLES AND COMPLEXITY TO INCREASE REPLAY VALUE

IMPROVE VISUAL FEEDBACK WITH ANIMATIONS OR SOUND EFFECTS

ADD BACKGROUND MUSIC OR AMBIENT SOUND FOR ATMOSPHERE

CREATE A LEVEL SYSTEM WITH INCREASING DIFFICULTY

