

DEPT. OF COMPUTER SCIENCE UMM AL QURA
UNIVERSITY, KSA.
COMPUTER GRAPHICS -1401830-8

"THE COMPUTER GEEKS"
PRESENT TO YOU

THE SEARCHING ADVENTURE

IP

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COMPUTER GRAPHICS' PROJECT REPORT
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WORK DISTRIBUTION

Task	أروى	حلا	غدي	موده	نوره
Alli baba's object	☀	☀	☀	☀	☀
Alli baba's motions		☀			
hunted house object	☀	☀	☀	☀	☀
hunted house motions	☀	☀			☀
welcome page				☀	
presentation	☀				
report				☀	
manual			☀		
Demo					☀

INTRODUCTION

OUR PROJECT IS GOING TO BE A HIDDEN OBJECT PUZZLE ADVENTURE (HOPA), WHERE THE PLAYER MUST FIND A CERTAIN NUMBER OF OBJECTS THAT ARE HIDDEN IN THE SCENE TO ACHIEVE THE FINAL GOAL. FIRST, THE PLAYER WILL START AT THE "START PAGE" WHICH DISPLAYS 2 OPTIONS TO CHOOSE FROM WITH A CLICK, EACH REPRESENTING A STAGE IN THE GAME WITH DIFFERENT CONCEPTS. THE PLAYER HAS TO CLICK ON THE OBJECTS THAT ARE FOUND FOR THE GAME TO PROGRESS. IF ALL OBJECTS ARE SUCCESSFULLY FOUND THE PUZZLE IS SOLVED.

GOALS



ENTERTAINMENT



ENHANCE OBSERVATION SKILLS

METHODOLOGY

MULTIPLE METHODS ARE USED TO DISPLAY VERITY OF CIRCLE SHAPES, FROM FILLED TO EMPTY, HALF AND FULL, AND ALSO TO MAKE AN OVAL OUT OF IT. IT'S IMPLEMENTED IN THE BEGINNING OF THE CODE

METHODS:

- DRAWFILLEDCIRCLE()
- DRAWHOLLOWCIRCLE()
- DRAWFILLEDIRCLEHALF()
- DRAWHOLLOWCIRCLEHALF()
- DRAWFILLEDoval()

METHODOLOGY

DRAWSTROKETEXT() METHOD IS USED TO DISPLAY TEXTS ON SCREEN.

GLCOLOR() METHOD IS USED TO SET THE ELEMENTS COLORS.

MANY METHODS ARE USED TO DISPLAY OTHER SHAPES, SUCH AS: GLRECT(), GLVERTEX()

METHODOLOGY

TO ADD TEXTURE TO THE DESIRED OBJECTS GLENABLE(GL_BLEND); IS USED TO GIVE ACCESS TO THE METHOD GLBLENDFUNC()
LATER ON A NEW METHOD IS CREATED LOADTEXTURE() IS IMPLEMENTED TO MAP THE UPLOADED IMAGE TO THE OBJECT THEN IT'S CALLED IN THE INIT METHOD TO BE FINALLY IMPLEMENTED

METHODOLOGY

```
GLPUSHMATRIX();
    GLSCALEF(0.7, 0.7, 1.0);
    GLTRANSLATEF(GHOST2, 0.9, 0);
    GHOSTDRAW();
    GLPOPMATRIX();
IF (GHOST2>1.5){
    //TO WHERE
    GHOST2=-2.0; }
```

THIS SEQUENCE OF METHODS
ARE USED TO MOVE A GHOST
FROM POSITION TO ANOTHER
BY CHANGING IT'S
COORDINATES

METHODOLOGY

FOR THE MOUSE INTERACTION METHOD WE DECLARED TWO VARIABLES, "FLAG" FOR EACH OBJECT, WHICH CALLS THE OBJECT METHOD IN THE DISPLAY WHEN A SPECIFIC CONDITION IS TRUE. AND "ORDER" WHICH IS A COUNTER THAT IS INCREMENTED WHEN A CORRECT CLICK CONDITION IS TRIGGERED.

METHODOLOGY

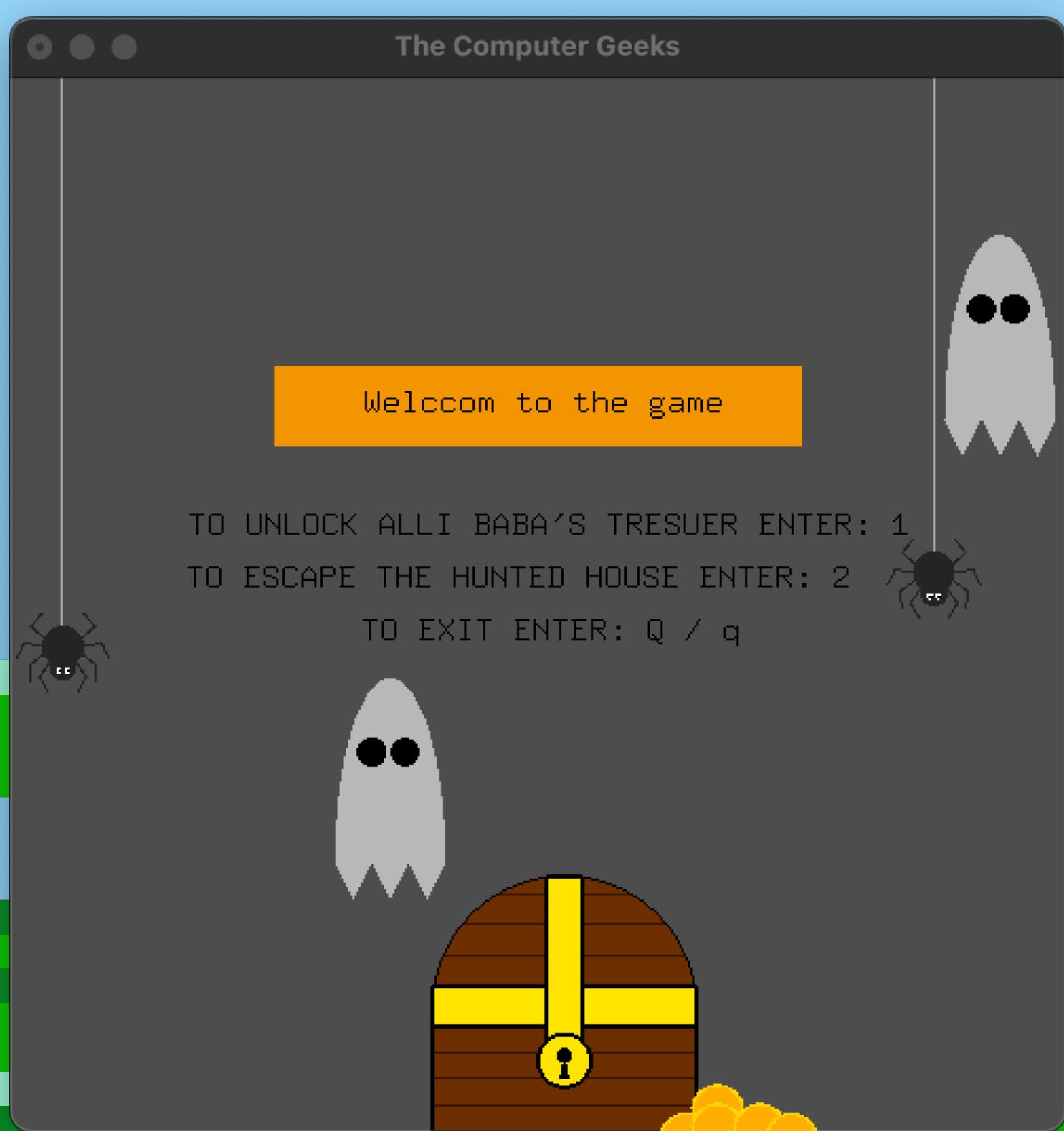
CONT.

THE METHOD TESTS WHETHER A CLICK IS ON THE SPECIFIED COORDINATES FOR THE OBJECT, IF YES, THE OBJECT IS TRANSITIONED TO THE LOCK, ELSE, THE USER WILL HAVE TO TRY ANOTHER OBJECT TO CLICK ON UNTIL ALL OBJECT ARE FOUND IN THE CORRECT ORDER. WHEN ALL OBJECTS ARE SUCCESSFULLY FOUND, A MESSAGE WILL POP UP INDICATING THAT THE GAME IS COMPLETED.

METHODOLOGY

EVERY OBJECT IN THE SCENE IS IN DIFFERENT METHODS AND BEING CALLED IN THE DISPLAY METHOD AND SOME OF THEM ARE SCALED AND TRANSLATED TO FIT IN THE DESIRED SIZE AND POSITION BY PUSHING AND POPPING MATRICES AND USE THE METHODS: GLSCALE() AND GLTRANSLATE().

RESULTS



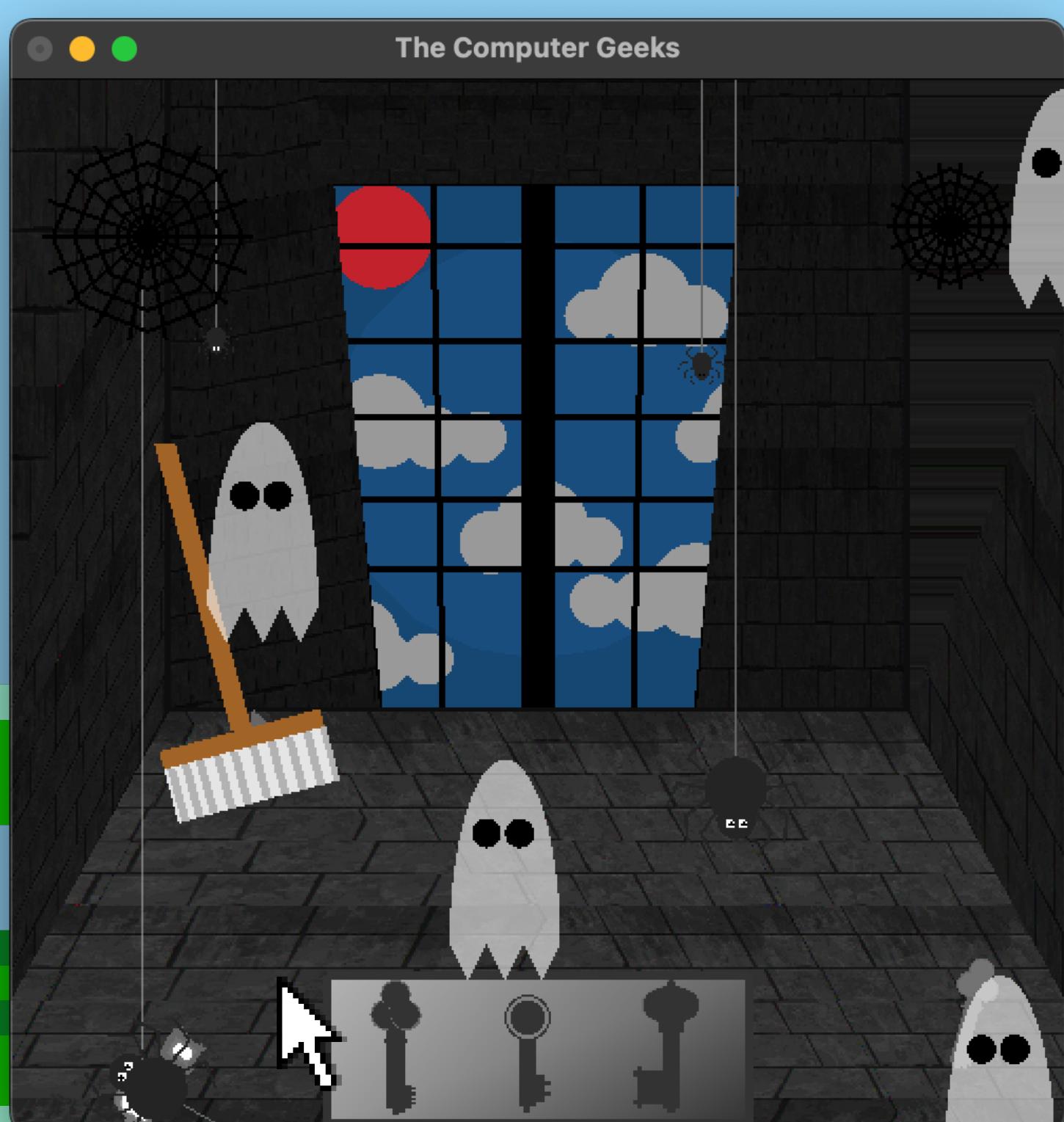
RESULTS



RESULTS



RESULTS



RESULTS

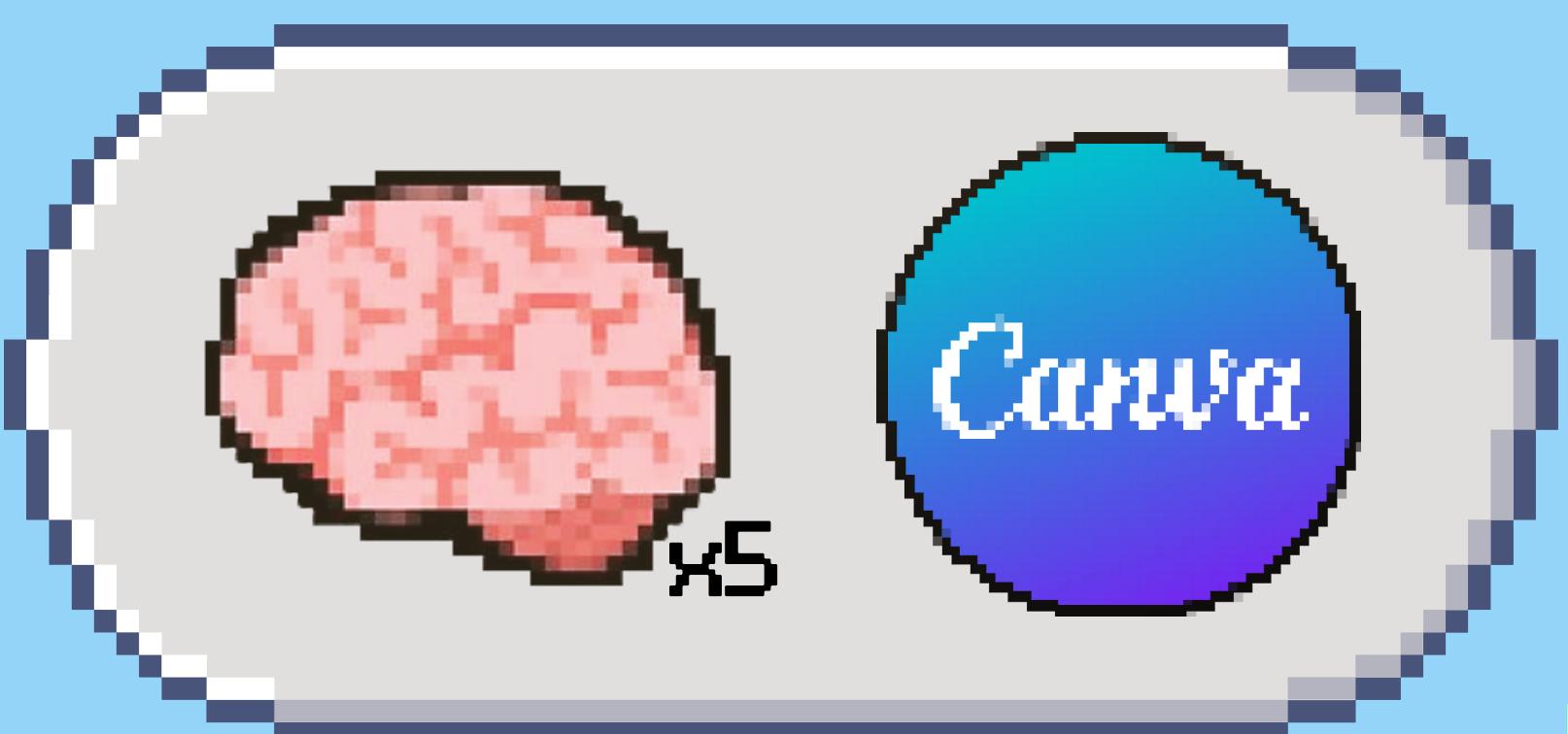


CONCLUSION

IN THIS PROJECT WE LEARNT MANY THINGS STARTING FROM PLANING AND CODING TILL SEARCHING AND DEBUGGING. WE'VE BEEN THROUGH HARD TIMES FIGURING OUT LOGICAL ERRORS SUCH AS "WHY MULTIPLE SCENES AREN'T WORKING TOGETHER?" OR "WHY THE MOUSE ACTIONS AREN'T WORKING PROBABLY", AND MANY OTHER OPTICALS.

WE HAD FUN DOING THIS PROJECT AND WE WOULD LIKE TO DEVELOP IT IN THE FUTURE BY ENHANCING SOME METHODS AND ACTIONS AND ADD OTHER FUTURES LIKE SCORE, TIME LIMIT, LEVELS, AND CHARACTERS AS WELL.

TOOLS



Let's Go!