Scratch Programming Rubrics

Criteria	1	0.75	0.5	0
Backgrounds	Created own or edited existing backgrounds	Used an appropriate background without editing	Used a background that does not fit well with project	Used no background (blank white stage)
Sprites	Used multiple sprites that enhance the project; Created own sprites or edited sprites' costumes	Used more than one sprite	Only used one sprite	Used no sprites
Programming Blocks	Used all required blocks; Scripts work properly and enhance project	Only used required programming blocks	Missed some of the required programming blocks; some scripts do not work properly	Scripts do not work at all or no programming blocks used
Animations and Sound Effects	Both animation and Sound effects used effectively	Both animation and sound effects used but did not make sense	Used just sound or animation.	NO animation or sound used.

Course Facilitator	External
Name:	Name:
Signature:	Signature:

Project Presentation Rubrics

Criteria	1	0.75	0.5	0.25	0
Body language	Student presented the material with confidence.	Student presented material but could have been more confident.	Student had many difficulties presenting materials.	Student was hardly able to complete presentation.	Student was unable to complete presentation.
Language Skills	correct usage	appropriate vocabulary and grammar	understandable (rhythm, intonation, accent)	spoken loud enough to hear easily	No transitions are used.
Oral Presentation	Animations are smooth. Animations enhance the presentation.	Smooth animations are used on most slides.	Smooth animations are used on some slides	Very few animations are used and/or they distract from the presentation.	No animations are used.
Wardrobe	Formal	Semi-Formal	Smart Casual	Business Casual	Casual

Course Facilitator	**External**
Name:	**Name:**
Signature:	**Signature:**

PROJECT REPORT RUBRICS

Checklist

S.No:	Items	Tick if properly written
1.	Acknowledgments	
2.	ABSTRACT	
3.	Table of Contents	
4.	Chapter I: Introduction & Motivation	
5.	Chapter II: Algorithm	
6.	Chapter III: Flow Chart	
7.	Chapter IV: Coding	
8.	Chapter V: Results	
9.	Chapter VI: Conclusion	
10.	Chapter VII: Future Work	
11.	References	

Items present	Marks	Assigned
All	1.5	
More than Half	1.0	
Less Than Half	0.5	

Project ppt Rubrics

Criteria	1	0.75	0.5	0.25	0
Pictures, Clip Art Background	Images are appropriate. Layout is pleasing to the eye.	Images are appropriate. Layout is cluttered.	Most images are appropriate	Images are inappropriate.	No images
Slide Transitions	Transitions are smooth. Transitions enhance the presentation.	Smooth transitions are used on most slides.	Smooth transitions are used on some slides	Very few transitions are used and/or they distract from the presentation.	No transitions are used.
Animations	Animations are smooth. Animations enhance the presentation.	Smooth animations are used on most slides.	Smooth animations are used on some slides	Very few animations are used and/or they distract from the presentation.	No animations are used.
Slides as per template	All	More than half	Less than half	Very few	none

Verifier's Name & Signature: _____

Information & Communications Technologies Course

Computer System Engineering Department

Sukkur Institute of Business Administration University

"SPACE SHOOTER GAME" (ROCKET SHOOT ROCKS AND ROCKS DESTROYED)

LAB PROJECT REPORT

SUBMITTED BY:

NAME: ABDUL BASIT MEMON.

CMS ID: 133-21-0004.

Certificate

It is certified that _____ a student of **BE-I** has carried out the necessary work of **Information & Communications Technologies** as per course of studies prevailed at the Computer System Engineering Department, Sukkur Institute of Business Administration for **FALL-2021.**

Date: _____   Instructor's Signature

ACKNOWLEDGMENTS

We say thanks to Sir Muhammad Irfan Younas who suggested the idea of this project during the course of ICT and special thanks to those people who helped us through social websites and Internet.

ABSTRACT

This report is a summary of the work that I have produced while working on the Scratch programming lessons for developing my project. SPACE SHOOTER IS a game where, two objects in Space Environment. ROCKET SHIP is present or moving in space and then a huge rocks are exist and rocks moving towards and crash rocket ship. In this situation, rocket ship in danger and rocket ship protect itself. It shoot rocks and rocks destroyed with shot/bullet. While in playing

unfortunately missing or leaving any rock it put rocket ship in danger.

Soon or later crash the rocket ship. While in case of collide or touch with rocks, rocket ship crash and the game is stop. During your play time you also earns score.

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CHAPTER I: Introduction

INTRODUCTION

Scratch is a visual programming environment that lets users create interactive, media-rich projects [1]. People have created a wide range of projects with Scratch, including animated stories, games, online news shows, book reports, greeting cards, music videos, science projects, tutorials, simulations, and sensor-driven art and music projects. The Scratch application is used to create projects containing media and scripts. Images and sounds can be

imported or created in Scratch using a built-in paint tool and sound recorder [2].

Space shooter is a game which individual playing for entertainments purpose only. Player shoot or destroyed the rocks through rocket ship in space and earns score in game. But in case of touch with rock the game is over. So this game is also console based through programming.

In our project, we made the game with the help of C++ programming into a computer game. In which computer

displays a rocket ship and huge rocks in space Environment. Next, computer ask and says to press the space and up down keys for serving in a game consequently and earns numbers.

Motivation:

This project is to promote Scratch programing and to improve computational thinking. Not only programming but also to gives signals

to somebody for know something about

space environment .

CHAPTER II: Algorithm

Step 1: CLICK ON FLAG TO PLAY

Step 2: when up key pressed rocket ship up ward and down key pressed to down

Step 3: declare variable to pressed space key for shoot .

Step 4: displays rocks are in space and collide with rocket ship

Step 5: when rocket ship shoot rocks destroyed

Step 6: carefully shoot it all and don't missed any rock

Step 7: Move rocket properly don't touched with rocks

Step 8: if you not playing carefully the rocks are missed you not servive.

Step 9: if your rocket ship collide with rock game is stopped.

Step 10: during your play time you earns score

Step 11: The score you earns from your game play it also displays on the top

Step 12: If you want to play again you also pressed flag icon

CHAPTER III: Flowchart
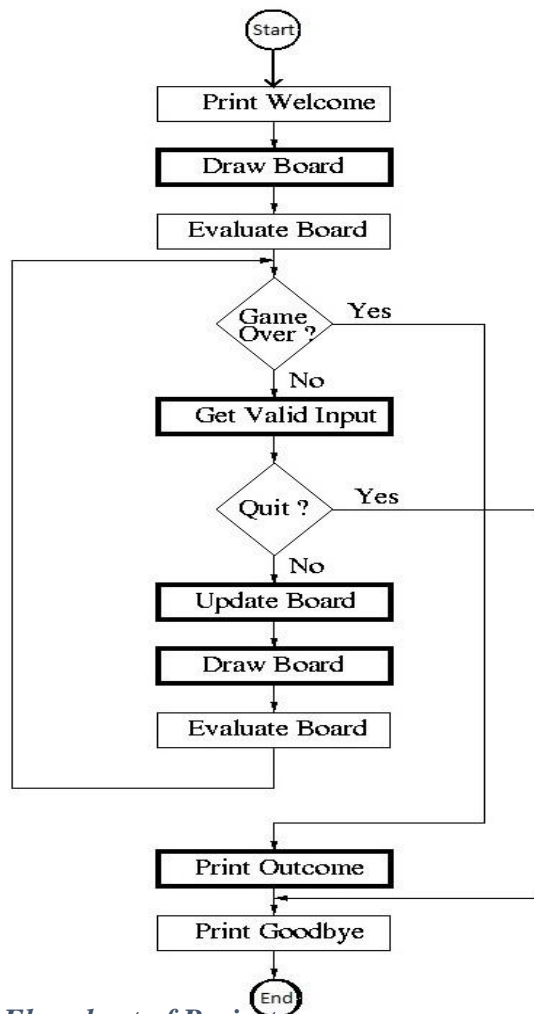
Figure 1: Flowchart of Project

CHAPTER IV: CODING

Below is the sample code for the project

```
when [flag] clicked
set size to 50 %
show
repeat 5
    create clone of myself
hide
```

```
when I start as a clone
go to x: 240 y: pick random 170 to -170
set speed to pick random -2 to -8
repeat until touching Rocketship ?
    change x by speed
    if y position < -240 then
        go to x: 240 y: pick random 170 to -170
    if touching Button2 ? then
        change score by 1
        go to x: 240 y: pick random 150 to -150
stop all
```
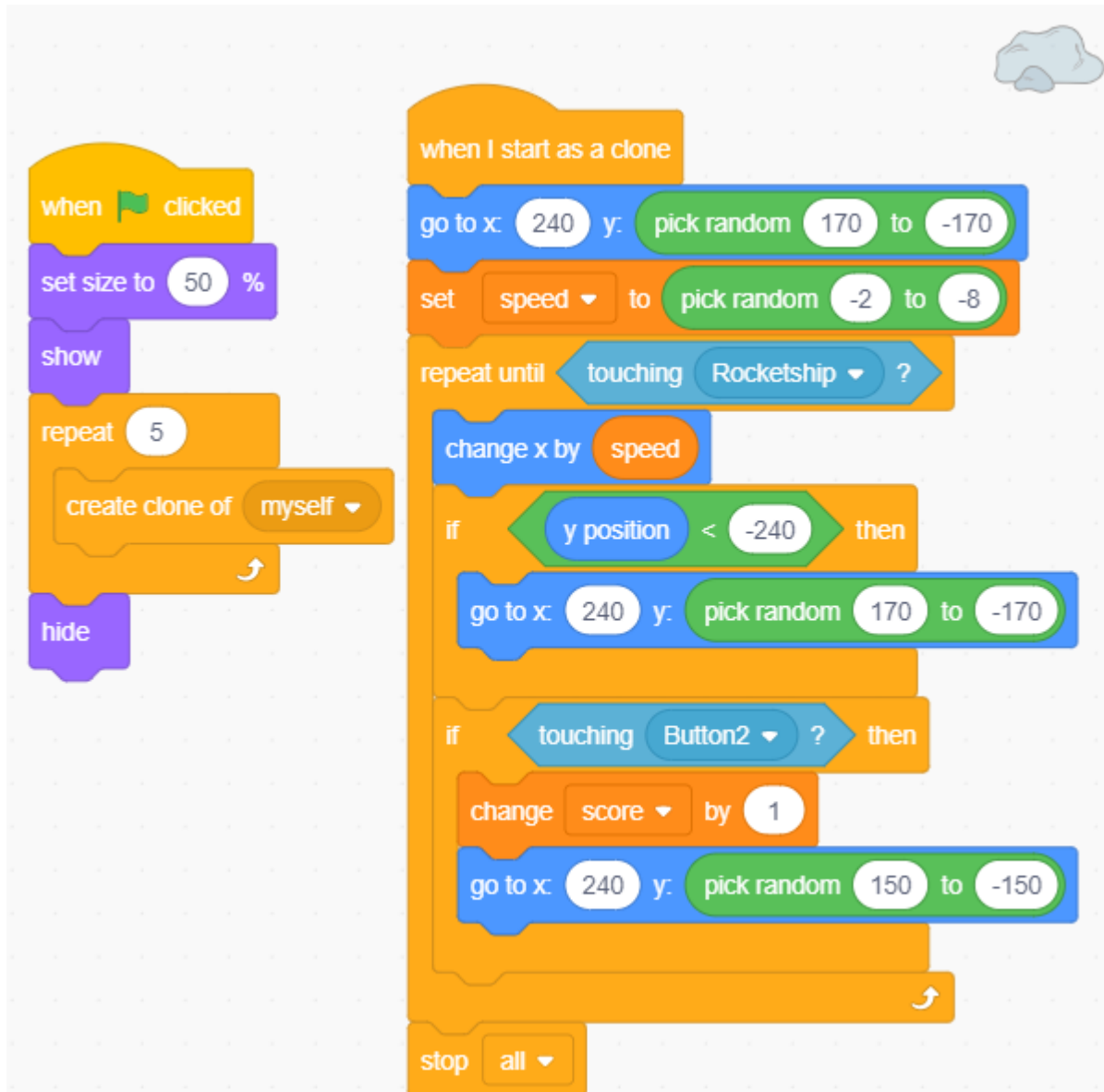
Figure 2: Code of Project

CHAPTER V: CODE EXPLANATION AND RESULTS

Screenshots of the underwater world and the related code created by a student are illustrated above.
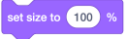
The child used twelve sprites to build the stage.

After starting the project with 15 when green flag clicked blocks, the diver in the orange suit and the related bubbles move to the right until reaching the edge (if on edge, bounce).
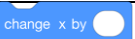
Using twelve repeat blocks, the program execution has no explicit end. Of the 60 blocks used out of four block types (Event, Control, Motion, Sound) ten wait _ secs were used to structure the motion.

All other fish and bubble sprites, which are not shown in the code, included the same scripts as the illustrated sprites and were left out of the figure for a better overview.

Specific for this Scratch project is the heavy use of play sound _ until done (10) with the same sound.

Table 1: Blocks used in project

BLOCK	IMAGE	ABSOLUTE USAGE	PERCENTAGE OF BLOCKS USAGE
When green flag clicked	when ⚑ clicked	4 Blocks	11%
When start as clone	when I start as a clone	2 Blocks	5%
Repeat/Repeat until	repeat	3 Blocks	8%
If Then	if _ then	5 Blocks	14%
Pick Random To	pick random ( ) to ( )	4 Blocks	11%
GO TO X AND Y	go to x: ( ) y: ( )	5 BLOCKS	14%
SHOW /HIDE	show hide	4 BLOCKS	11%
TOUCHING OBJECT	touching edge ?	4 BLOCKS	11%
SET SIZE TO ( )%	set size to 100 %	3 BLOCKS	8%
SET MY VARIABLE	change my variable by ( )	4 BLOCKS	11%

PLAY SOUND UNTIL DONE	play sound ( ) until done	1 BLOCK	2%
CHANGE X /CHANGE Y	change x by ( )	3 BLOCKS	8%
KEY PRESSED	key ( ) pressed?	3 BLOCKS	8%
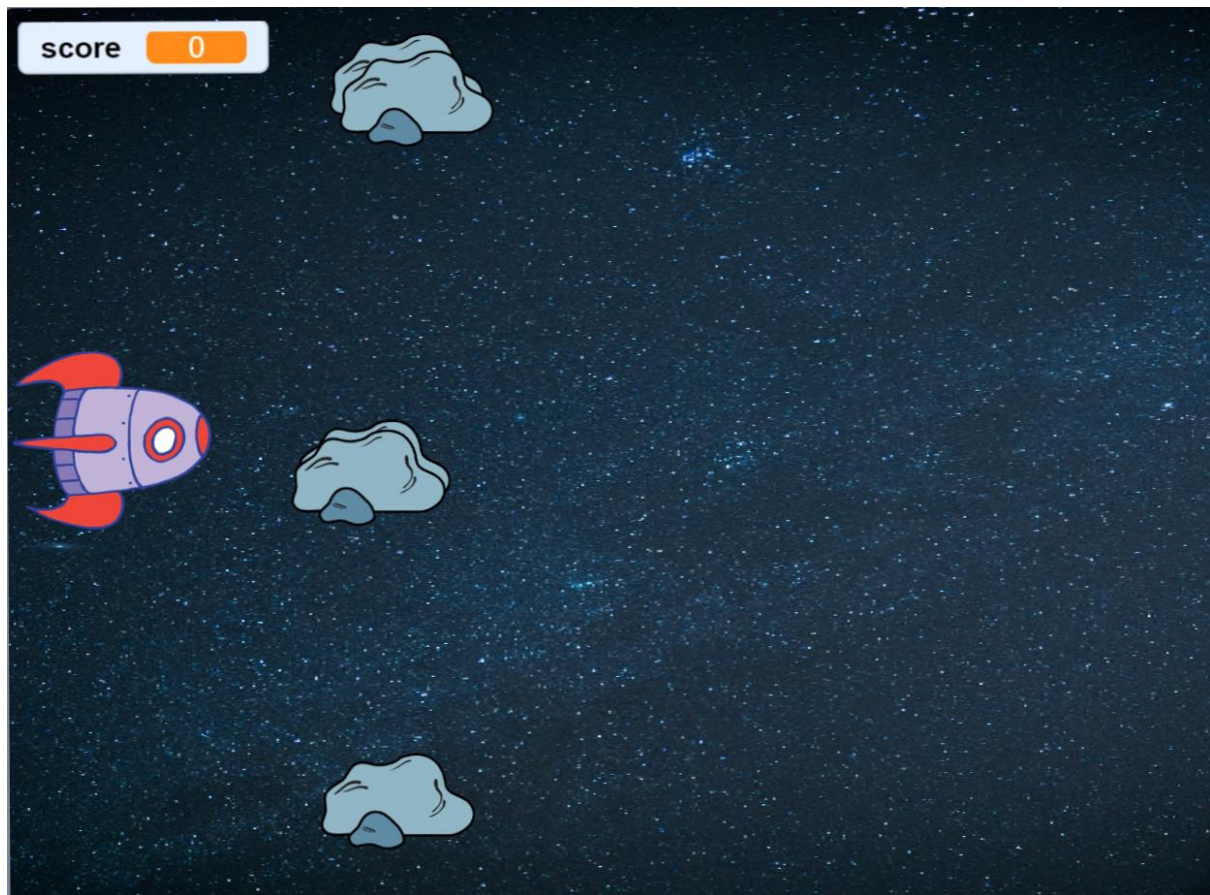
Figure 3: Screenshots of the underwater world and the related code created by a student are illustrated.

CHAPTER VI: CONCLUSION

Bringing the space shooter game into the consoled based is the core purpose of this project. In addition to this, spreading Rocket ship and rocks configuration in space environment. Not only to this but also to make such a project which covers some of the aspects of programming skills. Along with this, making the project which is a mind game is to entertain people and to make people confident and brave. Thus, these are the reason for making the game (**Space shooter game**).

REFRENCES

1. M. Armoni and J. Gal-Ezer. "Early computing education," ACM Inroads vol. 5, issue 4, pp. 54-59, 2014
2. M. Armoni and J. Gal-Ezer. "Early computing education," ACM Inroads vol. 5, issue 4, pp. 54-59, 2014