Project report on Offline Snake Game

Objective: The game called snake game typically involve the player controlling a snake. The most common version of the game involves snake eating food which make it longer. The player loses when the snake either runs into boarder or own its body. Because of this the game become more difficult as it goes on due to the growth of the snake.

SWOT ANALYSIS

	Helpful to achieving the objective	Harmful to achieving the objective
Internal origin (attributes of the organization)	Strengths	Weaknesses
External origin (attributes of the environment)	Opportunities	Threats

4W'S & 1H:

What: This was created in early days and still being played today. The object of this game is to take turns with the computer or human component and to move a snake around the boarder.

When: This game will be played when ever will get leaser time.

Why: The main motto to play this game is to get relaxation of mind.

Where: This game application will found anywhere in the Universe.

How: The snake starts with a head and tail and can grow in length by one each time when it consume a food pallet.

Requirements:

High level requirements:

ID	Descriptions	Category	Status
HL_01	User shall be able to play GUI snake game	Technical	Implemented
HL_02	User shall be able to view high score per games	Technical	Implemented
HL_03	New score shall get saved everytime user finishes playing a game	Technical	Future
HL_04	High scores shall be updated everytime a user ends a game	Technical	Future

Low level requirements:

ID	Description	HLR_ID	Implement
LR01	The snake shall be able to move based on the arrow keys pressed by the player	HR_01	Implemented
LR01_1	The up arrow key shall decrement y coordinate keeping x coordinate same of snake head	HR_01	Implemented
LR01_2	The down arrow key shall increment y coordinate keeping the x coordinate same of snake head	HR_01	Implemented
LR01_3	The left arrow key shall decrement x coordinate keeping the y coordinate same of snake head	HR_01	Implemented
LR01_4	The right arrow key shall increment x coordinate keeping the y coordinate same of snake head	HR_01	Implemented
LR02	Game shall end if the cells occupied by snake overlaps	HR_01	Implemented
LR03	Game shall be able to update the cells compromising of snake to emulate moving snakes	HR_01	Implemented

Test plan:

High level test plan:

Test ID	Description	Exp I/p	Exp O/P	Status	Type of test
H_01	Check if snake game GUI executes properly	Key press in accordance to menu option	GUI should open	pass	Technical
H_02	Check if snake moves in accordance to arrow keys	Key press for movement of snake	Snake should turn in desired direction	pass	Technical
H_03	Check if game gets over if when snake head hits itself	Key press	Pop up message showing "game over" with point scored	pass	Technical
H_04	Check if snake game gets over if the snake head hits the wall	Key press	Pop up message showing "game over" with point scored	pass	Technical
H_05	Check if player wins if all the cubes except one are filled with snake body	Key press	Pop up message showing "you win"	pass	Technical
H_06	Check if snakes gets longer each time its head overlaps with cube	Key press	Snake length should increases by 1	pass	Technical

Low level test plan:

Test ID	HLT ID	Description	Exp IN	Exp OUT	Actual OUT	Status	Type	Feature Name
L_01	H_01	Application should start w/o any error	Application Execute	Application Execute	Application Executed	success		Snake
L_02	H_02	Grid of 500 px X 500 px should be developed	Width and height of the grid in px	Grid of 500x500 px should be created	Grid of 500x500 px should be created	success		Snake
L_03	H_03	Grid should contain 30 rows and 30 columns	Row number	20x20 grid should be created	20x20 grid was created	success		Snake
L_04	H_04	Snake head x-coordinate should decrement by 1 if left arrow is pressed	Up key press	Snake should left	Snake move left	success		Snake

Output of the snake game: