

Main Form

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
1.1	Click “New Game” button.	Check button functions properly in terms of user navigation between forms.	Should open “New Game” form and activate it. “Home” form should close.	Closed “Home” form. Opened and activated “New Game” form as expected.	None to be taken.
1.2	Click “Help” button.	Check button functions properly in terms of user navigation between forms.	Should open “Help” form and activate it. “Home” form should close.	“Home” form closed and the “Help” form was opened and activated.	None to be taken.
1.3	Click “High Scores” button.	Check button functions properly in terms of user navigation between forms.	Should open “High Scores” form and activate it. “Home” form should close.	Closed “Menu” form. Opened and activated “High Scores” form. However, I attempted this later on, when the high scores text file (playerscore.txt) had not been created. This caused a runtime error to occur as the “High Scores” form was attempting to load a text file that did not exist yet.	Since the error was due to the program attempting to get information from a text file that had not been created yet, I added an if statement within the “GetPlayerHighScore” method. The if statement: “if <code>(File.Exists("playerscore</code>

					.txt"))" was added to prevent the function from running if the text file it reads from does not exist. This fixed the problem.
14	Click "Exit" button.	Check button functions properly so that users can close the form.	The "Home" form should close.	"frmHome" closed successfully.	None to be taken.
1.5	Check the last player's score.	Ensure that the previous player's score is displayed correctly on the "frmHome" form.	Previous score is clearly visible in "lblLastScore" as well as a concatenated "%".	Score was consistently reported as being "0" regardless of what the actual score was for the player. However, the "%" was successfully retrieved from the results form. Only the variable is the problem.	

New Game

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
2.1	Enter name into textbox	See if it is carried over to each consecutive form	Entered text should be visible on each appropriate form	Entered Name was successively carried over.	None to be taken.
2.2	Select “Fibonacci” Avatar (Picture Box)	See if “Fibonacci” image expands when clicked and if the image is carried over to each consecutive form as the player avatar.	Fibonacci avatar should expand slightly when clicked. Avatar image should be visible on the bottom right of some of the following forms.	Fibonacci avatar was carried over successfully and is visible on all of the relevant forms. The image did enlarge slightly when clicked.	None to be taken.
2.3	Select “Archimedes” Avatar (Picture Box)	See if “Archimedes” image expands when clicked and if the image is carried over to each consecutive form as the player avatar.	Archimedes avatar should expand slightly when clicked. Avatar image should be visible on the bottom right of some of the following forms.	Archimedes avatar was carried over successfully and is visible on all of the relevant forms. The image did enlarge slightly when clicked.	None to be taken.

2.4	Select “Pythagoras” Avatar (Picture Box)	See if “Pythagoras” image expands when clicked and if the image is carried over to each consecutive form as the player avatar.	Pythagoras avatar should expand slightly when clicked. Avatar image should be visible on the bottom right of some of the following forms.	Pythagoras avatar was carried over successfully and is visible on all of the relevant forms. The image did enlarge slightly when clicked.	None to be taken.
2.5	Click “Menu” button	Check button functions properly in terms of user navigation between forms.	Should open “frmHome” and close this form.	Opened Menu and closed current form successfully.	None to be taken.
2.6	Click “Start” button	Check button functions properly in terms of user navigation between forms.	Should open “frmQuestion1” and close “frmHome”	Question 1 form was opened and activated. The menu form was closed successfully.	None to be taken.
2.7	Attempt to start quiz without having an Avatar selected (With a player name entered)	Ensure player cannot proceed without choosing an avatar.	A Message Box should appear stating “Please enter your name and select an avatar”. The user should not be able to proceed until they have done so.	The Message Box appeared as expected and it is not possible to proceed on to question one until an avatar has been selected.	None to be taken.
2.8	Attempt to start quiz without having entered a player name (With avatar	Ensure player cannot proceed without entering a player name as this could cause	A Message Box should appear stating “Please enter your name and select an avatar”. The user should not be able to proceed until they have done so.	The Message box failed to appear and the player can move on to question one, despite the player name not being entered. All subsequent forms which refer to	

	selected).	errors further down the line regarding player profiles and high scores.		the string simply display an empty label.	
2.9	Hover mouse over the three player avatar images.	To check whether or not the cursor image becomes a hand so as to let the users know that the images are clickable.	The pointer image should change to that of a hand smoothly when the mouse is on the image. When removed, the cursor image should revert back to the usual arrow pointer.	The pointer image changed to that of a hand smoothly when the mouse was left on the image. When removed, the cursor image immediately returned to the original arrow.	None to be taken.

Question 1

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
3.1	Click on the “Square number” (True) radio button and the “Cube number” (False) radio button.	Check if the “Square number” radio button and the “Cube number” radio button can be selected and verify also that the user can still change their decision after selecting an answer.	Should be able to click on each button. If successful, the button will turn blue. I should also be able to select the other button, making it turn blue, and the previous answer should revert to the original colour.	Each radio button is completely functional. The selected answer can also be changed repeatedly. As expected, the currently selected radio button is blue and the other radio button is the original grey colour.	None to be taken.
3.2	Select the “Square Number” (correct answer) and continue.	Verify that if the player answers the question correctly, they will get exactly 5 points.	Once the question has been answered correctly, the player should be awarded 5 points to their score. Whether this functions correctly will only be visible through the “Results” form as the score is only visible from here.	I answered the question correctly and continued on to the results form to find that the number of points given for the correct answer in question one was 5.	None to be taken.

3.3	Select the “Cube Number” (incorrect answer) and continue.	Ensure that if the player answers incorrectly, they neither gain nor lose any points.	If the answer for question one is incorrect, there should be no points awarded (nor should there be any deducted). At this stage they would have no points if the question was answered incorrectly.	I selected the wrong answer for question one and continued on to the results form. As expected, there were no points added to the player score. The final score for question one was displayed as “0”.	None to be taken.
3.4	Click on “Blackboard” button.	Check button functions properly to open a form.	Once clicked, "btnBlackboard" should open "frmBlackboard" and activate it. The new form should be opened as a new window with the question one form still open in the background.	When I clicked on the Blackboard button, the form opened as a new window with the question one form still left open. The Blackboard form is not centred to screen so the form does not obstruct the question form behind it.	None to be taken.
3.5	Click on “Next” button.	Ensure button functions properly to allow users to advance to the next question.	Should open and activate "frmQuestion2" and close "frmQuestion1".	Question one form was opened and activated as expected. The question one form was closed.	None to be taken.
3.6	Check player name is visible.	Certify that the player name is carried over and displayed in a label.	Once the form loads, the name entered on the “New Game” form should be carried over to the current form and visible in the bottom-right corner of the form, above the player avatar.	As predicted, the player’s name I had previously submitted was displayed in the lower corner, in a blue label, once the form had loaded.	None to be taken.
3.7	Check selected player avatar is visible.	Check that the selected player avatar icon is displayed in a picture box.	Once the form loads, the avatar that was selected on the “New Game” form should be visible in the bottom-right corner of the form, below the player name.	After the form had loaded, the avatar that I had selected at the start of the quiz was clearly visible in a picture box in the lower corner of the form.	None to be taken.

3.8	Attempt to continue without selecting an answer.	To ensure that player cannot proceed without answering the question.	If the “Next” button is clicked without an answer having been selected, the player should be denied access to the next question until the current question has been answered and a message box should appear to advise the user of this.	I attempted to continue to the next form without answering, to find that I was not allowed to do so. A message box appeared as predicted stating “Select an answer”.	None to be taken.

Question 2

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
4.1	Drag the answer textbox text and drop it into the empty textboxes.	Verify that the player can use the drag and drop feature to answer the question.	It should be possible to move the text from the answer textboxes to the empty textboxes by holding down the mouse on the text and letting go of the mouse on the desired textbox.	When I dragged the text from the answer textboxes, moved it over to the empty textboxes and dropped it on to them, the text I dragged determined the text property of the empty textbox.	None to be taken.
4.2	Drag answer textbox text and drop it on to a textbox that has already had text dropped on to it.	Ensure that the player has the option to change their answer should they make a mistake or change their mind.	After the text has been dropped onto the textbox, I should be able to drop different text on to the same textbox. The text should replace the previous text and not add onto it.	I was able to successfully drag the text onto a textbox that had already had text dropped onto it. As expected, the text replaced that of the prior answer.	None to be taken.
4.3	Attempt to change the text of the answer textboxes using the keyboard.	Certify that the player can only use the drag and drop feature to answer the question as this will allow the	If I attempt to enter characters using the keyboard, my input should be rejected as the textboxes are set to read only.	I clicked on the textboxes and tested typing with the keyboard; no text was added to the text boxes.	None to be taken.

		question to be completed much more easily.			
4.4	Attempt to drag and drop non-text items such as images and files onto the textboxes.	Check that the code put in place to prevent users dragging non-text files into the textbox operates as expected as these unsupported files would cause errors/problems in the program.	If the user attempts to drag an unsupported file into the text box, the file should be prevented from being dropped onto it.	When an image file was dragged over the text box the mouse image changed to the unavailable icon to let me know it was not possible. When I dropped the file, the text box simply had no response. This also worked correctly with other formats I tested such as .mp3 and .exe.	None to be taken.
4.5	Select the correct answers and continue.	Certify that the player will get exactly 5 points for each part of this question they answer correctly.	Once the question has been answered correctly, the player should be awarded 5 points to their score for each section that was answered correctly. Whether this functions correctly will only be visible through the “Results” form as the score is only visible from here.	I answered all questions correctly and continued on to the results form to find that the number of points given for my answers in question one was 25. I later repeated this with a variety of combinations of correct and wrong answers in this one question to prove that each answer only adds 5 points to the score.	None to be taken.
4.6	Select the incorrect answers and continue.	Ensure that if the player answers incorrectly, they neither gain nor lose any points.	If all the answers for question two are incorrect, there should be no points awarded (nor should there be any deducted). The final score for this question should be “0”.	I dropped all the answers in to the wrong textboxes for question one and continued on to the results form. As expected, there were no points added to the player score.	None to be taken.

				The final score for question two was displayed as "0".	
4.7	Click on "Blackboard" button.	Check button functions properly to open a form.	Once clicked, "btnBlackboard" should open "frmBlackboard" and activate it. The new form should be opened as a new window with the question two window still open in a different window.	When I clicked on the Blackboard button, the form opened as a new window with the question two form still left open. The Blackboard form is not centred to screen so the form does not obstruct the question form behind it.	None to be taken.
4.8	Click on "Next" button.	Ensure button functions properly to allow users to advance to the next question.	Should open and activate "frmQuestion3" and close "frmQuestion2".	Question three form was opened and activated as expected. The question two form was closed.	None to be taken.
4.9	Check player name is visible.	Certify that the player name is carried over and displayed in a label.	Once the form loads, the name entered on the "New Game" form should be carried over to the current form and visible in the bottom-right corner of the form, above the player avatar.	As predicted, the player's name I had previously submitted was displayed in the lower corner, in a blue label, once the form had loaded.	None to be taken.
4.10	Check selected player avatar is visible.	Check that the selected player avatar icon is displayed in a picture box.	Once the form loads, the avatar that was selected on the "New Game" form should be visible in the bottom-right corner of the form, below the player name.	After the form had loaded, the avatar that I had selected at the start of the quiz was clearly visible in a picture box in the lower corner of the form.	None to be taken.
4.11	Attempt to continue without answering any part of the	To ensure that player cannot proceed without answering/	If the "Next" button is clicked without all of the text boxes having been filled, the player should be denied access to the next question	I attempted to continue to the next form without answering any of the question, to find that I was not allowed to proceed.	None to be taken.

	question (5 empty textboxes).	attempting the question.	until the entire question has been answered and a message box should appear to advise the user of this.	A message box appeared as predicted stating “Please put all answers in order”. I repeated this after with a few questions answered, proving that the user cannot move on with the quiz unless all questions are answered.	

Question 3

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
5.1	Use numeric up-down arrows to select answers.	To check that the player is able to answer the question with the mouse. Ensure the user does not input any negative or ridiculously large numbers.	If the up arrow on each numeric up-down is clicked the number in the box should increase by "1". If the down arrow is pressed it should decrease by "1". The minimum and maximum value of the numeric up-down must be "0" and "100" respectively. If the arrow buttons are held down, the number should be increased/decreased at a much faster rate.	Each time the numeric up-down up arrow was clicked, the value was augmented by "1". As expected, the down arrow decreased the value by "1". Holding the arrows down changed the numbers at a considerably faster speed. The possible value was successfully controlled to be between "0" and "100". This functioned correctly on all 5 numeric up-downs.	None to be taken.
5.2	Attempt to answer question using keyboard as input method (Number and arrow keys).	Verify that users are able to answer the questions using the keyboard, as this will allow a much faster input of their chosen answer.	Using the keyboard to enter numbers into the numeric up-downs should function the same as entering text into a textbox. It should be easy to repeatedly enter/alter the figures in the numeric up-downs. The arrow keys should function as a substitute for the arrow buttons and should work	I used the keyboard to answer the questions on this form to find that the digits I entered were successfully set to the value of the numeric up-downs. This was successful for all the numeric up-downs on this form. As expected the arrow keys did change the numeric up-down value and	None to be taken.

			in the same manner.	function in the same way as the arrow buttons.	
5.3	Try to add text to the value of the numeric up-downs (using keyboard).	Ensure that users cannot input inappropriate characters (symbols, text, etc.) as this could cause errors regarding the scoring system.	When the text/symbol key is pressed on the keyboard, there should be no input into the numeric up-down.	Pressing the text/symbol keys had no effect on the value of the numeric up-down as it only accepts numeric value.	Non to be taken.
5.4	Select the correct answers and continue.	Certify that the player will get exactly 5 points for each part of this question they answer correctly.	Once the question has been answered correctly, the player should be awarded 5 points to their score for each section that was answered correctly. Whether this functions correctly will only be visible through the "Results" form as the score is only visible from here.	I answered all questions correctly and continued on to the results form to find that the number of points given for my answers in question one was 25. I later repeated this with a variety of combinations of correct and wrong answers in this one question to prove that each answer only adds 5 points to the score.	None to be taken.
5.5	Select the incorrect answers and continue.	Ensure that if the player answers incorrectly, they neither gain nor lose any points.	If all the answers for question three are incorrect, there should be no points awarded (nor should there be any deducted). The final score for this question should be "0".	I used the numeric up-downs to select all wrong answers for question three and continued on to the results form. As expected, there were no points added to the player score. The final score for question three was displayed as "0".	None to be taken.

5.6	Click on "Blackboard" button.	Check button functions properly to open a form.	Once clicked, "btnBlackboard" should open "frmBlackboard" and activate it. The new form should be opened as a new window with the question three window still open in a different window.	When I clicked on the Blackboard button, the form opened as a new window with the question three form still left open. The Blackboard form is not centred to screen so the form does not obstruct the question form behind it.	None to be taken.
5.7	Click on "Next" button.	Ensure button functions properly to allow users to advance to the next question.	Should open and activate "frmQuestion4" and close "frmQuestion3".	Question four form was opened and activated as expected. The question three form was closed.	None to be taken.
5.8	Check player name is visible.	Certify that the player name is carried over and displayed in a label.	Once the form loads, the name entered on the "New Game" form should be carried over to the current form and visible in the bottom-right corner of the form, above the player avatar.	As predicted, the player's name I had previously submitted was displayed in the lower corner, in a blue label, once the form had loaded.	None to be taken.
5.9	Check selected player avatar is visible.	Check that the selected player avatar icon is displayed in a picture box.	Once the form loads, the avatar that was selected on the "New Game" form should be visible in the bottom-right corner of the form, below the player name.	After the form had loaded, the avatar that I had selected at the start of the quiz was clearly visible in a picture box in the lower corner of the form.	None to be taken.
5.10	Attempt to continue without answering any part of the question (5 empty numeric	To ensure that player cannot proceed without answering/attempting the question.	If the "Next" button is clicked without all of the numeric up-downs having an answer of at least "1", the player should be denied access to the next question until the entire question has been	I attempted to continue to the next form without answering any of the question, to find that I was not allowed to proceed. A message box appeared as predicted stating "Please answer	None to be taken.

	up-downs).		answered and a message box should appear to advise the user of this.	all questions". I repeated this after with a few (not all) of the questions answered, proving that the user cannot move on with the quiz unless every one of the questions is answered.	

Question 4

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
6.1	Click/unclick on answer checkboxes repeatedly.	Verify that users can select their answers using the mouse.	Once clicked, the checkboxes should display a small tick within them. If clicked again, the tick should disappear, showing that the answer has been deselected.	By clicking on the checkboxes, they did in fact display a small tick showing it had been selected. Clicking on them again caused the tick to disappear as expected. This was the same for all the checkboxes on this form.	None to be taken.
6.2	Check correct answers (checkboxes) and continue.	To see if the player is awarded the correct number of points for selecting the right answers.	If "7", "11" and "3" (correct answers) are checked and "9" and "4" (incorrect answers) are unchecked, the player should be awarded a total of "25" points for question four. If only some are correct, the player should only receive "5" points for each correct answer. Whether this functions correctly will only be visible through the "Results" form as the score is only visible from here.	I selected all the correct answers and left the incorrect answers unchecked. The results form later displayed that I got "25" points for this question. I repeated this numerous times with different combinations of correct and incorrect answers, each time getting "5" points for each answer I got right.	None to be taken.

6.3	Check the incorrect answers (checkboxes) and continue.	Ensure that if the player answers incorrectly, they neither gain nor lose any points.	If "7", "11" and "3" (correct answers) are not checked and "9" and "4" (incorrect answers) are checked, the player should be awarded no points for question four (nor should there be any deducted). If all was answered incorrectly, there should be "0" points awarded for this form.	I used the mouse to select all wrong answers for question four and continued on to the results form. As expected, there were no points added or taken away from the player score. The final score for question four was displayed as "0".	None to be taken.
6.4	Click on "Blackboard" button.	Check button functions properly to open a form.	Once clicked, "btnBlackboard" should open "frmBlackboard" and activate it. The new form should be opened as a new window with the question four window still open in a different window.	When I clicked on the Blackboard button, the form opened as a new window with the question four form still left open. The Blackboard form is not centred to screen so the form does not obstruct the question form behind it.	None to be taken.
6.5	Click on "Next" button.	Ensure button functions properly to allow users to advance to the next question.	Should open and activate "frmQuestion5" and close "frmQuestion4".	Question five form was opened and activated as expected. The question four form was closed.	None to be taken.
6.6	Check player name is visible.	Certify that the player name is carried over and displayed in a label.	Once the form loads, the name entered on the "New Game" form should be carried over to the current form and visible in the bottom-right corner of the form, above the player avatar.	As predicted, the player's name I had previously submitted was displayed in the lower corner, in a blue label, once the form had loaded.	None to be taken.
6.7	Check selected player avatar is	Check that the selected player	Once the form loads, the avatar that was selected on the "New	After the form had loaded, the avatar that I had selected at the	None to be taken.

	visible.	avatar icon is displayed in a picture box.	Game" form should be visible in the bottom-right corner of the form, below the player name.	start of the quiz was clearly visible in a picture box in the lower corner of the form.	
6.8	Attempt to continue without answering any of the question (5 empty checkboxes).	To ensure that player cannot proceed without answering/attempting the question.	If the "Next" button is clicked without any of the checkboxes having been selected, the player should be denied access to the next question until at least one has been checked and a message box should appear to advise the user of this.	I attempted to continue to the next form without checking any of the answers, to find that I was not allowed to proceed. A message box appeared as predicted stating "Please check at least one box". I repeated this after with just one of the checkboxes selected to find that, as expected, I was allowed to move on to the next question.	None to be taken.

Question 5

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
7.1	Select an answer using the combo-boxes.	Verify that users can select their answers using the mouse.	Once clicked, the combo-boxes should display options for “Yes” and “No” within them. If either option is clicked, the selected text should be set to the text value of the combo-box showing that this is the user’s selected answer.	By clicking on the combo-boxes, they displayed the two options for “Yes” and “No” as expected. Clicking on them caused the value of the combo-box to be set to the text of the selected option. This was the same for all the combo-boxes on this form.	None to be taken.
7.2	Check correct answers (combo-boxes) and continue.	To see if the player is awarded the correct number of points for selecting the right answers.	If the selected answers are “Yes”, “Yes”, “No”, “No”, and “Yes” respectively (correct answers), the player should be awarded a total of “25” points for question five. If only some are correct, the player should only receive “5” points for each correct answer. Whether this functions correctly will only be visible through the “Results” form as the score is only visible from here.	I selected all the correct answers. The results form later displayed that I got “25” points for this question. I repeated this numerous times with different combinations of correct and incorrect answers, each time getting “5” points for each answer I got right.	None to be taken.

7.3	Check the incorrect answers (combo-boxes) and continue.	Ensure that if the player answers incorrectly, they neither gain nor lose any points.	If the selected answers are "No", "No", "Yes", "Yes", and "No" respectively (incorrect answers), the player should be awarded no points (nor should there be any deducted) for each part of the question that is wrong. If all were answered incorrectly there should be "0" points awarded for this form.	I used the mouse to select all wrong answers for question five and continued on to the results form. As expected, there were no points added or taken away from the player score. The final score for question five was displayed as "0".	None to be taken.
7.4	Click on "Blackboard" button.	Check button functions properly to open a form.	Once clicked, "btnBlackboard" should open "frmBlackboard" and activate it. The new form should be opened as a new window with the question five window still open in a different window.	When I clicked on the Blackboard button, the form opened as a new window with the question five form still left open. The Blackboard form is not centred to screen so the form does not obstruct the question form behind it.	None to be taken.
7.5	Click on "Finish" button.	Ensure button functions properly to allow users to advance to the results page.	Should open and activate "frmResults" and close "frmQuestion5".	Results form was opened and activated as expected. The question five form was closed.	None to be taken.
7.6	Check player name is visible.	Certify that the player name is carried over and displayed in a label.	Once the form loads, the name entered on the "New Game" form should be carried over to the current form and visible in the bottom-right corner of the form, above the player avatar.	As predicted, the player's name I had previously submitted was displayed in the lower corner, in a blue label, once the form had loaded.	None to be taken.

7.7	Check selected player avatar is visible.	Check that the selected player avatar icon is displayed in a picture box.	Once the form loads, the avatar that was selected on the “New Game” form should be visible in the bottom-right corner of the form, below the player name.	After the form had loaded, the avatar that I had selected at the start of the quiz was clearly visible in a picture box in the lower corner of the form.	None to be taken.
7.8	Attempt to continue without answering any of the question (5 empty combo-boxes).	To ensure that player cannot proceed without answering/attempting the question.	If the “Next” button is clicked without any of the combo-boxes having an answer, the player should be denied access to the next question until an answer is selected and a message box should appear to advise the user of this. The user cannot move on unless all of the combo-boxes have an answer selected.	I attempted to continue to the next form without selecting any of the answers, to find that I was not allowed to proceed. A message box appeared as predicted stating “Please fill in all blanks”. I repeated this after with all but one of the combo-boxes answered to conclude that, as expected, I was not allowed to move on to the results until all of the question was answered.	None to be taken.

Blackboard

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
8.1	Draw on the blackboard using the mouse.	Test that the pen feature works as this is the most essential part of the blackboard form.	When the left-click button on the mouse is held down and the mouse is moved, a white line should be drawn in the mouse's trail.	I held the left-click button down and moved the mouse in all directions. As expected, a white line was drawn wherever I moved my mouse.	None to be taken.
8.2	Click on the "Erase" button.	Ensure the user has the option to clear the blackboard in case they run out of room or make a mistake.	When the button is pressed, all of the line graphics on the form should be cleared and the form should be empty (as it was before).	After I clicked on the "Erase" button, the lines I had previously drawn were deleted and the form was left blank with a black background.	None to be taken
8.3	Click the "Close" button.	Check button functions properly so that users can close the blackboard when it is no longer needed.	The "Blackboard" form should close. The question form that was open beforehand should remain open	Blackboard closed successfully and the question form behind it remained open.	None to be taken.

Help

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
9.1	Click on the "Menu" button	Check button functions properly regarding navigation between forms so that the player can return to the main menu.	"frmHome" should be opened and activated. "frmHelp" should close.	"frmHome" was successfully opened and activated. "frmHelp" was successfully closed.	None to be taken.

Results

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
10.1	Click “High Scores” button.	Check button functions properly in terms of user navigation between forms.	Should open “High Scores” form and activate it. “Results” form should close.	Closed current form. Opened and activated “High Scores” form.	None to be taken.
10.2	Check player name is visible.	Certify that the player name is carried over and displayed in a label.	Once the form loads, the name entered on the “New Game” form should be carried over to the current form and visible in the bottom-right corner of the form, above the player avatar.	As predicted, the player’s name I had previously submitted was displayed in the lower corner, in a blue label, once the form had loaded.	None to be taken.
10.3	Check selected player avatar is visible.	Check that the selected player avatar icon is displayed in a picture box.	Once the form loads, the avatar that was selected on the “New Game” form should be visible in the bottom-right corner of the form, below the player name.	After the form had loaded, the avatar that I had selected at the start of the quiz was clearly visible in a picture box in the lower corner of the form.	None to be taken.
10.4	Check that the score achieved in questions 1,2,3,4 and 5 are carried over and clearly	To verify that the player has the opportunity to view their score for each question	Once the “Results” form has loaded, the score for each of the questions should be visible in the appropriate label.	After I loaded the “Results” form, the scores from all the questions were clearly visible in the labels for the scores.	None to be taken.

	displayed on the form.	after they have taken the quiz.			
10.5	Take the quiz a few times in a row without closing the project.	To be sure that the player score displayed is correct each and every time the user takes the quiz.	The labels on the results page should display the exact score obtained on each of the questions for that particular attempt.	After the first attempt, the score displayed was the exact number obtained on the relevant question. However on the second, third and all subsequent attempts, the score for each question increased further and further beyond the maximum possible points available. This was because the integer variables for the scores added on their new score instead of replacing it.	
10.6	Take the quiz and check the percentage score.	Verify that the percentage score players are given is correct and is displayed in the label.	If I take the quiz, the percentage score should be correct (score / maximum score * 100). If I score no points, the percentage should be "0". If I score full points, I should be given "100". If successful, the label should display the rounded figure to no decimal places and a concatenated "%" symbol.	When I took the quiz, the score I was given was correct. The figure in the label was clearly visible, rounded to no decimal places and had a "%" symbol at the end as expected.	None to be taken.
10.7	Take the quiz and check the percentage score text's colour.	Certify that if the player gets "50%" or more, the font colour for the percentage score will be green.	If I get "50%" or above then the font colour for the label should be green to demonstrate the passing score.	When I answered the majority of questions correctly and proceeded to the "Results" form, the font colour for the label was green.	None to be taken.

10.8	Take the quiz and check the percentage score text's colour.	Ensure that if the player gets below "50%", the font colour for the percentage score will be red.	If I get "49%" or below then the font colour for the label should be red to demonstrate the passing score.	When I answered the majority of questions incorrectly and proceeded to the "Results" form, the font colour for the label was successfully set to red.	None to be taken.

High Scores

Form & Test #	Test Data	Reason for Test	Expected Outcome	Outcome	Corrective Action
11.1	Click on the “Menu” button	Check button functions properly regarding navigation between forms so that the player can return to the main menu.	“frmHome” should be opened and activated. “frmHighscores” should close.	“frmHome” was successfully opened and activated. “frmHighscores” was successfully closed.	None to be taken.
11.2	Check listbox “lbxHighScore” is not empty.	Make sure that the high score data was successfully displayed in the listbox.	Once the form loads, the listbox should display all previous player names and the score each obtained.	When “frmHighscores” had loaded, all the names and scores in the “playerscore.txt” file were displayed as expected.	
11.3	Read the items of listbox “lbxHighScore”	Ensure that the high score data was displayed in the correct format with the correct	When the form loads, the listbox should display each player’s name followed by an arrow and “Score:” with the obtained score percentage at the end.	Once “frmHighscores” had loaded, all the names and scores in the “playerscore.txt” file were displayed as expected. One example includes: “John → Score: 100%”.	None to be taken.

		concatenations.			
11.4	Check listbox “lbxHighScore” has presented the high scores in the right order.	Certify that the high scores are arranged numerically from highest to lowest.	The percentage score should be sorted numerically so that the higher scores should be at the top of the list and the lower scores should be at the bottom.	Initially, the high score appeared to be displayed correctly. However, the code I used sorted the scores as if they were strings, meaning it only took the first digit into account when arranging numbers (i.e. 50 was placed above 30 but 20 was placed above 100).	
11.5	Enter a name that has already been used.	Verify that the program is able to deal will duplicate names.	If there is a duplicate name in the “playerscore.txt” file, the code should rename any lines with names that have been taken.	As expected, the program added “(1)” to the end of the name of the first duplicate, a “(2)” to the second duplicate and so on.	None to be taken.

Evidence

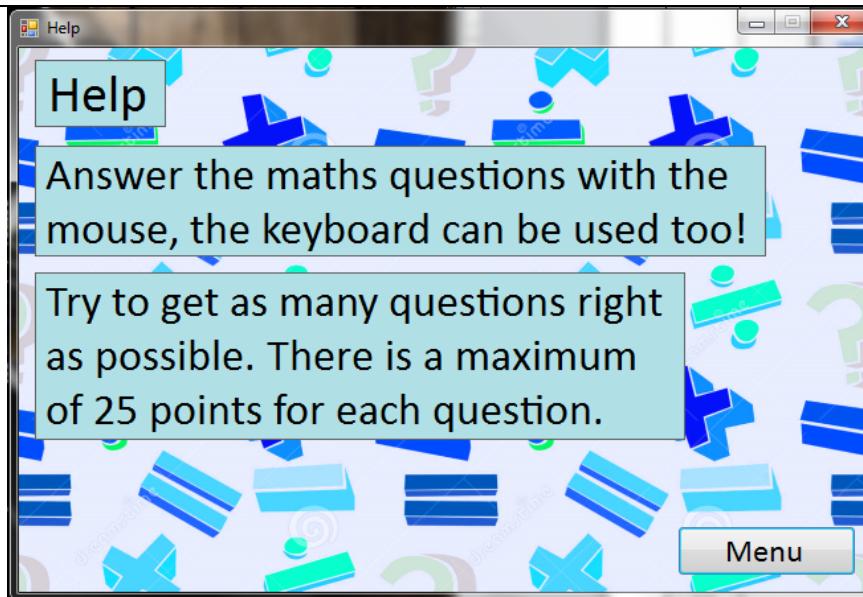
Form /
Test #

Print-Screen

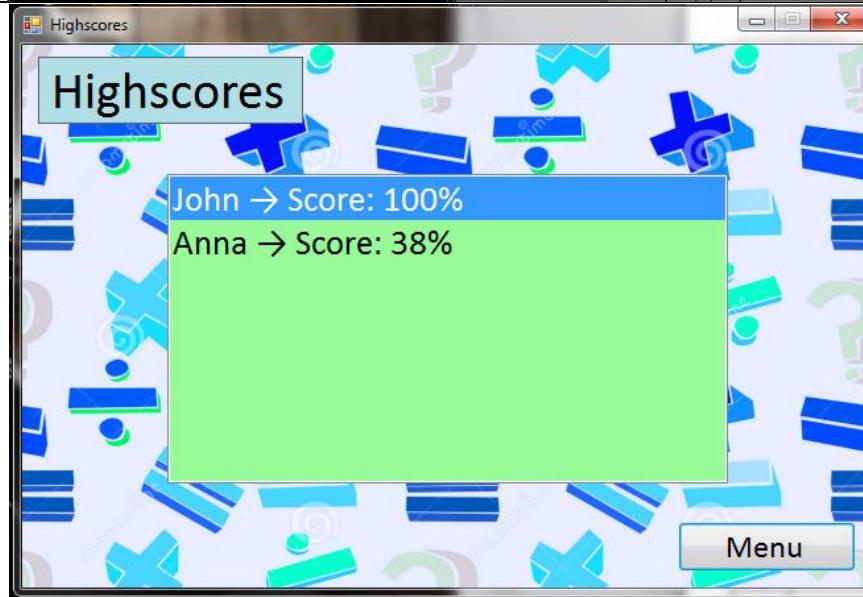
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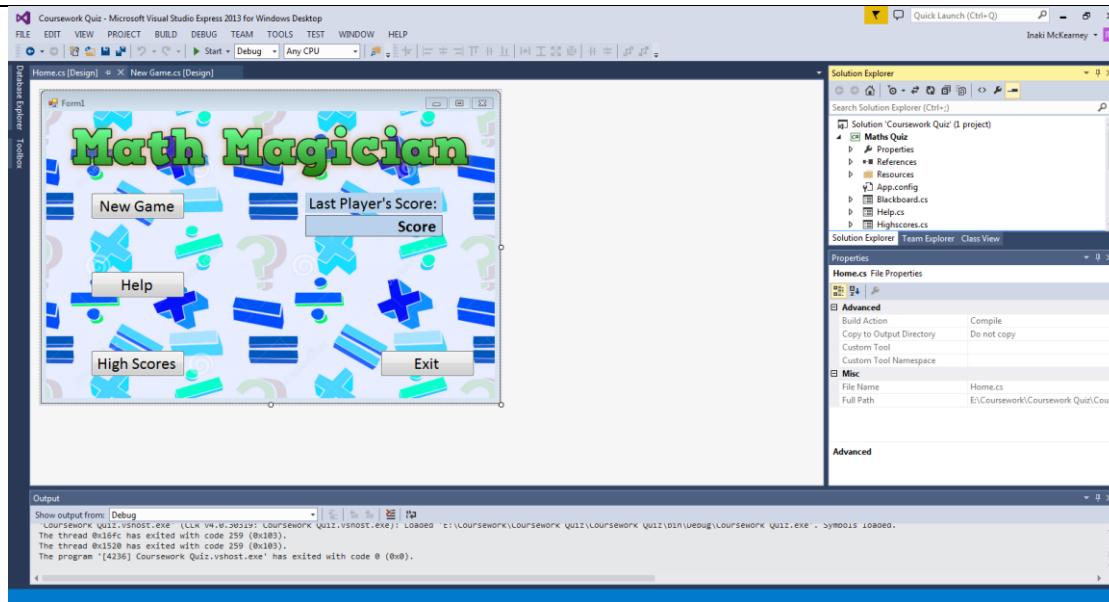
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1.3



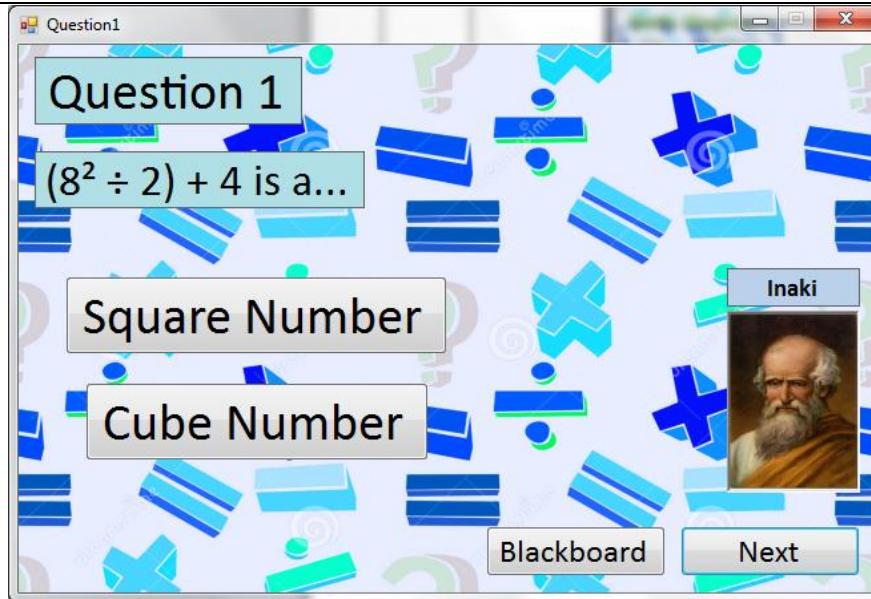
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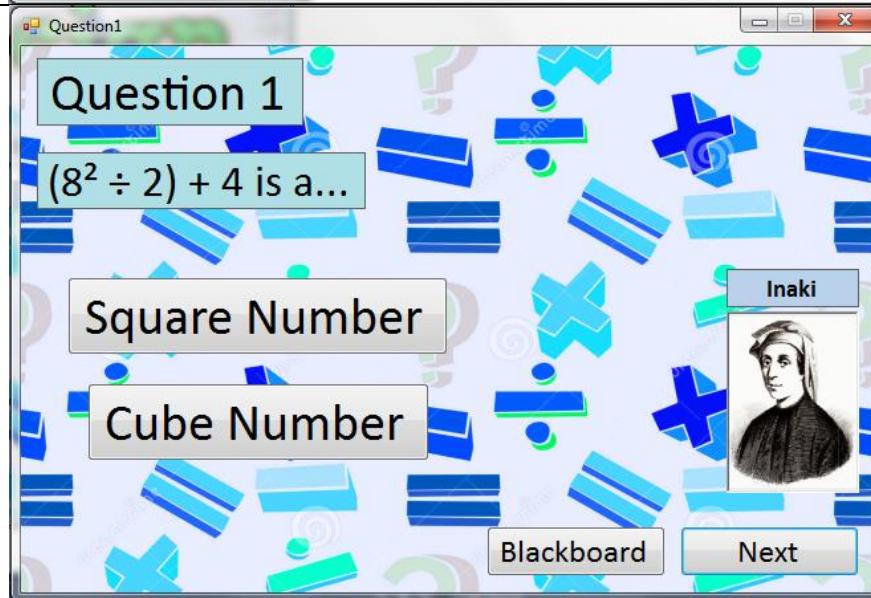
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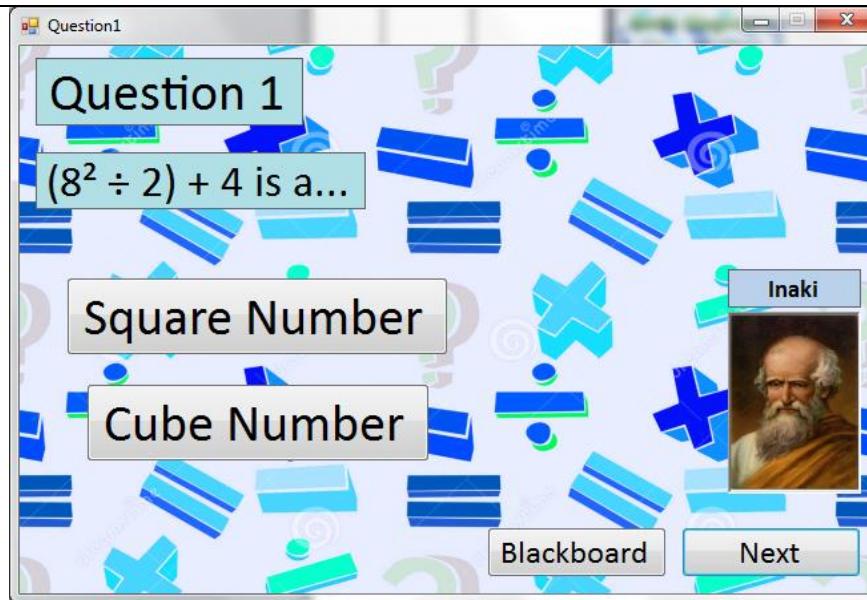
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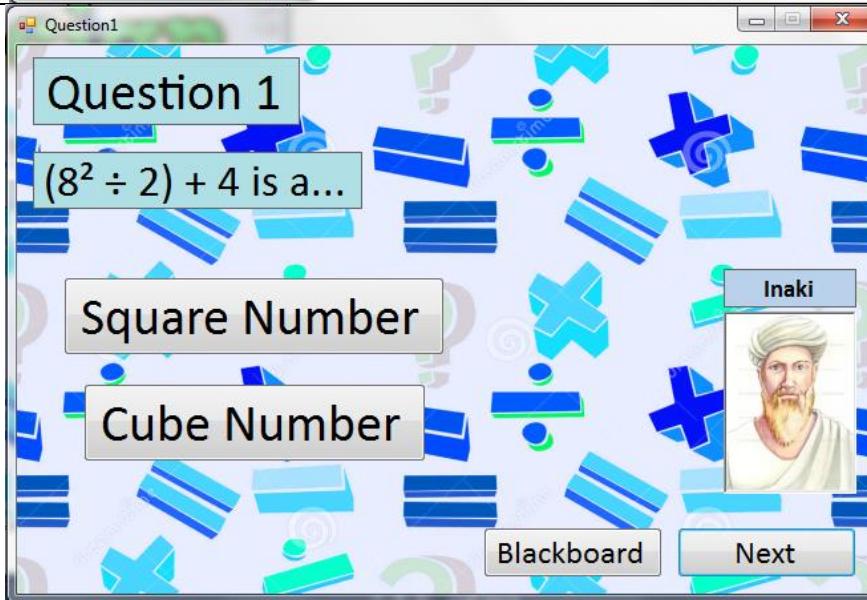
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2.3



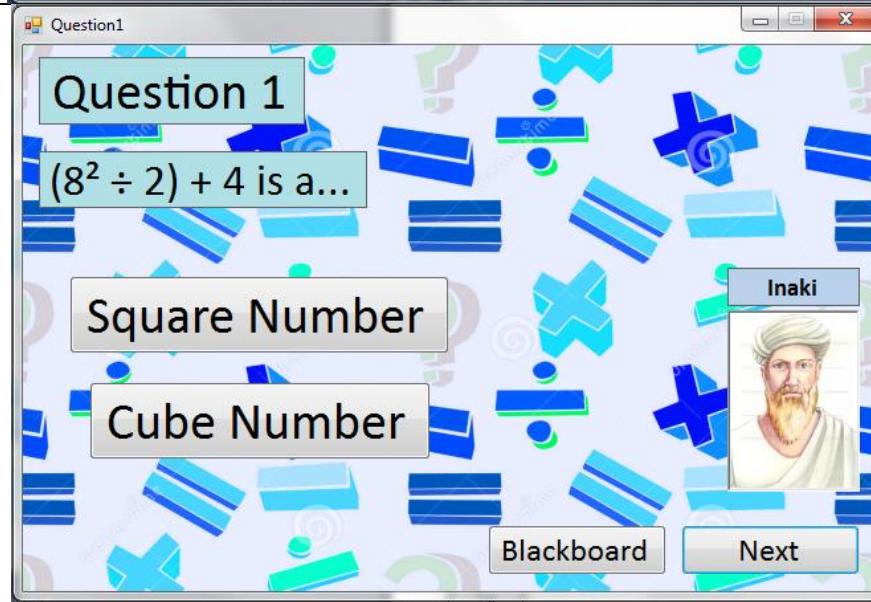
2.4



2.5



2.6



2.7



2.8

Question1

Question 1

$(8^2 \div 2) + 4$ is a...

Square Number

Cube Number

Blackboard

Next

Question1

Question 1

$(8^2 \div 2) + 4$ is a...

Square Number

Cube Number

Blackboard

Next



2.9



3.1

Testing.docx - WordPad

Form #	Reason	Expected Outcome
Form & Test #	Test Data	Reason for Test
3.1	Click on the "Square number" [True] radio button and then the "Cube number" [False] radio button.	Check if the "Square number" radio button is selected. If successful, verify also that the user can still make a decision after selecting an answer.
3.2	Select the "Square Number" (correct answer) and continue.	Verify that if the player answers the question correctly, they will get exactly 5 points.
3.3	Select the "Cube Number" (incorrect answer) and continue.	Ensure that if the player answers incorrectly, they neither gain nor lose any points.
3.4	Click on "Blackboard" button.	Check button properties to open a form.

Testing.docx - Microsoft Word

Question1

$(8^2 \div 2) + 4$ is a...

Inaki

Square Number

Cube Number

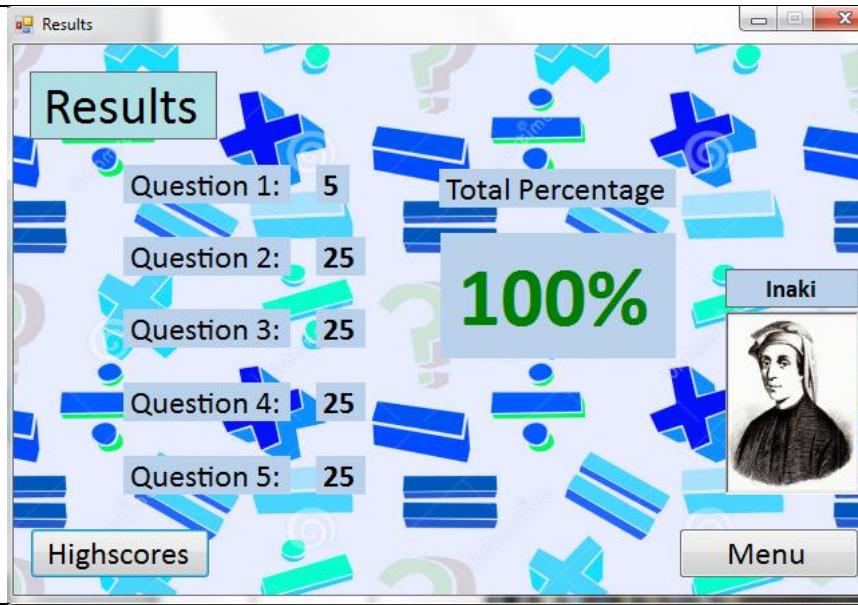
Blackboard

Next

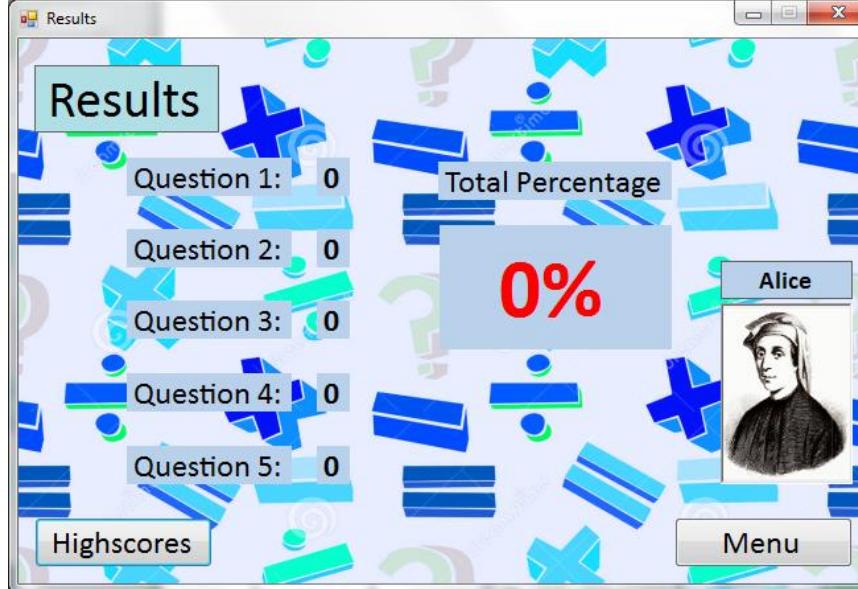
4.4
4.5
4.6
4.7
4.8
4.9
4.10

19:12
27/04/2015

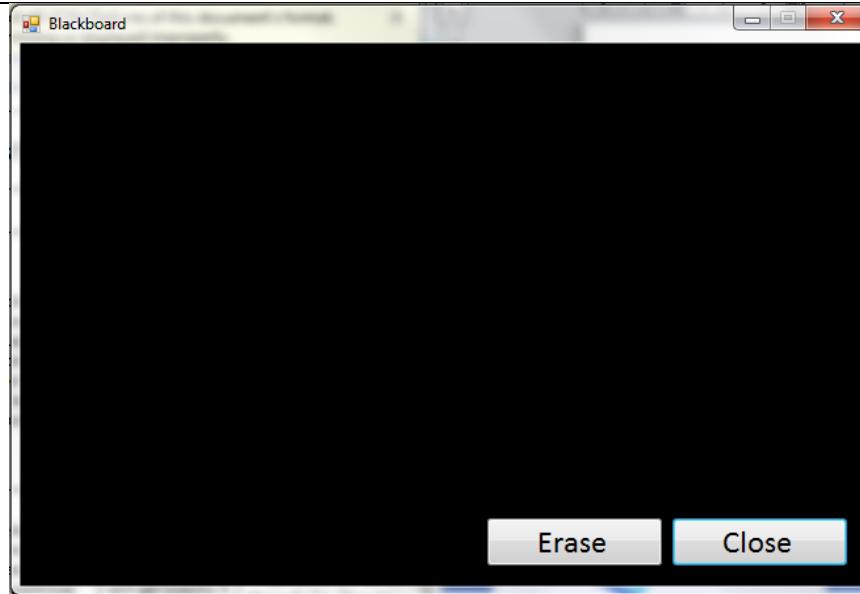
3.2



3.3



3.4



3.5

Question 2

Arange these standard form numbers from highest to lowest (Drag and Drop)

2.3 X 10³

1.5 X 10⁶

3.2 X 10⁻⁴

4.6 X 10⁷

3.9 X 10⁻²

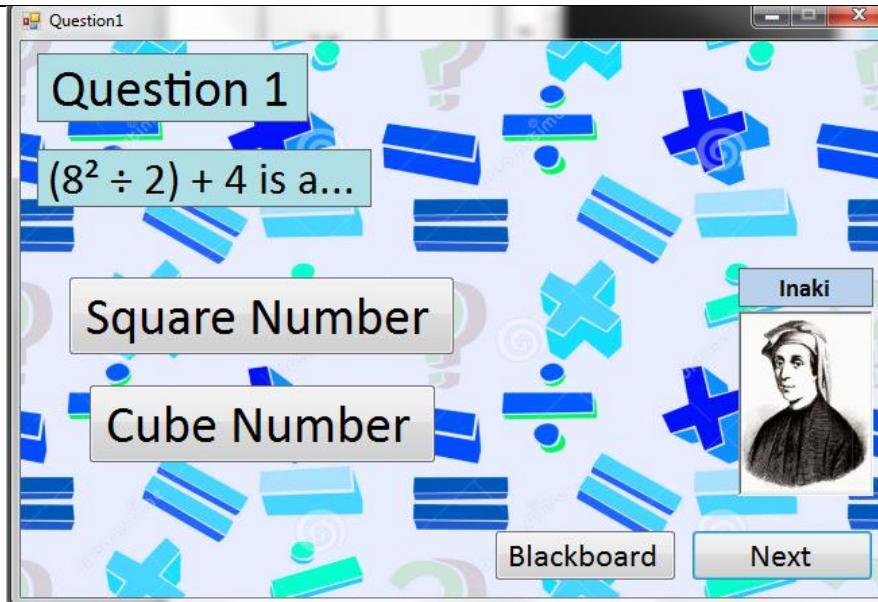
Inaki

Blackboard

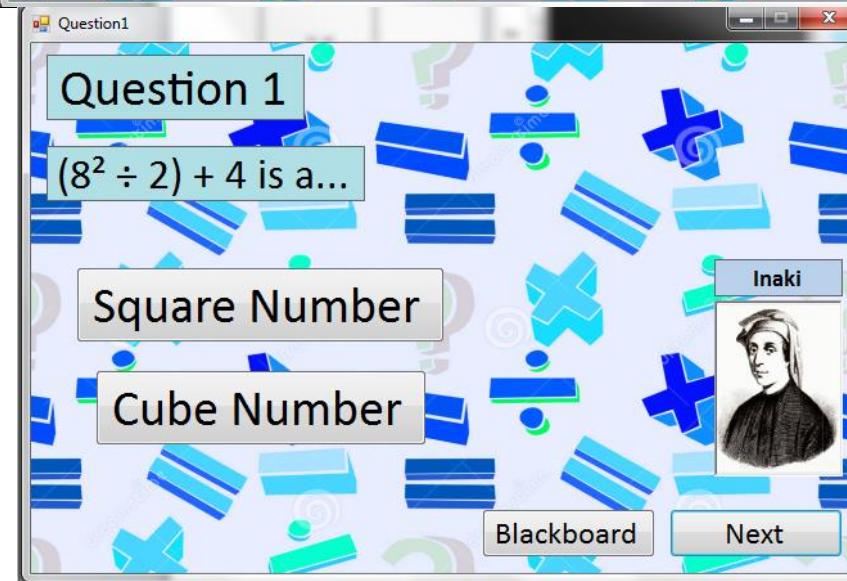
Next

A screenshot of a computer screen showing a drag-and-drop sorting game titled "Question 2". The game has a light blue background with various mathematical symbols like question marks, plus signs, minus signs, and multiplication signs scattered around. In the top left, there's a blue box containing the text "Question 2". Below it is another blue box containing the instruction "Arange these standard form numbers from highest to lowest (Drag and Drop)". To the right of these boxes is a portrait of a man with a white headband, labeled "Inaki". On the left side of the screen, there is a vertical list of five standard form numbers: "2.3 X 10³", "1.5 X 10⁶", "3.2 X 10⁻⁴", "4.6 X 10⁷", and "3.9 X 10⁻²". To the right of each number is a green rectangular box with a blue border, which is part of a horizontal row of five such boxes. At the bottom right of the screen are two buttons: "Blackboard" and "Next".

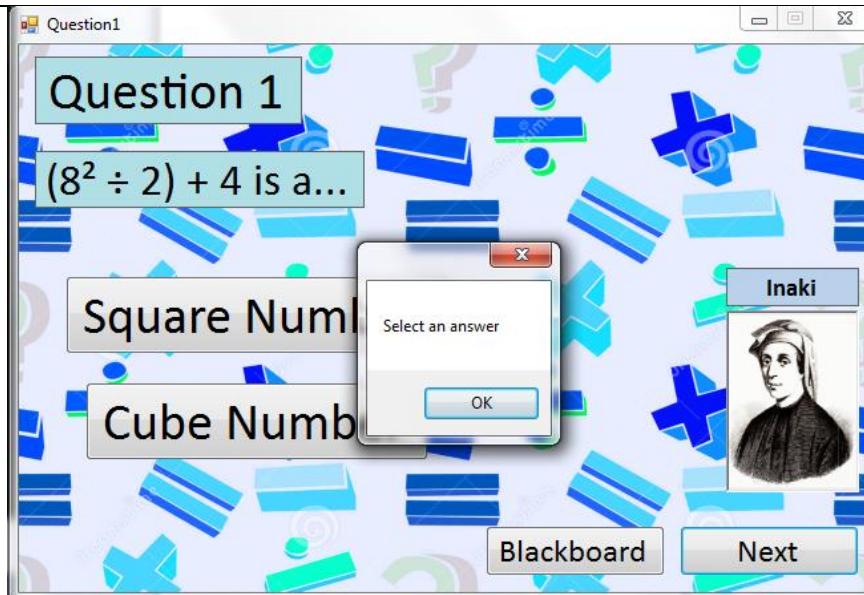
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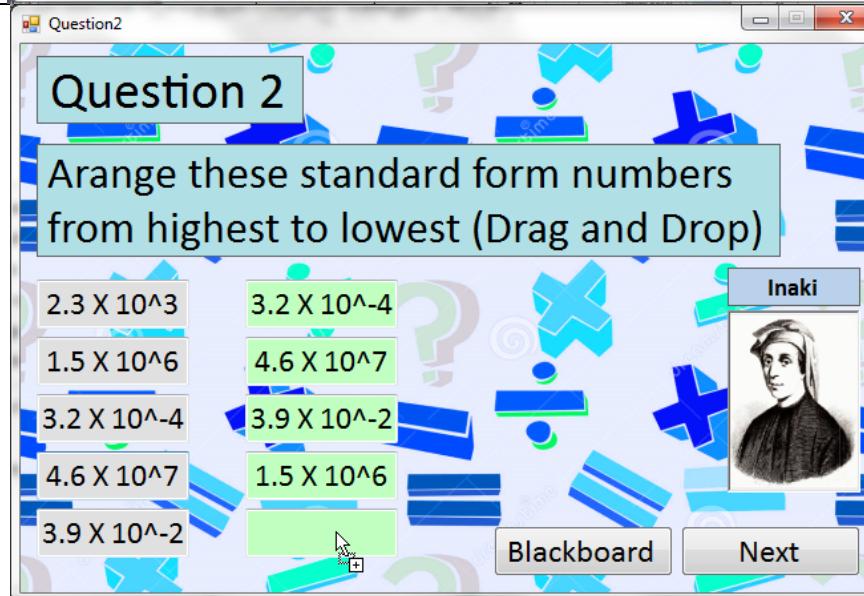
3.7



3.8



4.1



4.2

Question 2

Arange these standard form numbers from highest to lowest (Drag and Drop)

2.3 X 10³ 3.2 X 10⁻⁴
1.5 X 10⁶ 3.2 X 10⁻⁴
3.2 X 10⁻⁴ 3.2 X 10⁻⁴
4.6 X 10⁷ 4.6 X 10⁷
3.9 X 10⁻² 3.2 X 10⁻⁴

Inaki

Blackboard Next

4.3

Question 2

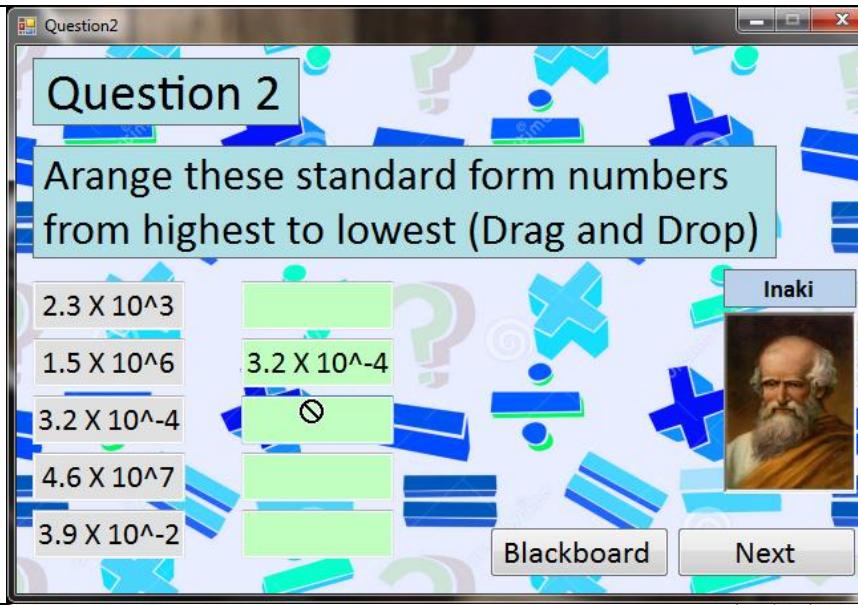
Arange these standard form numbers from highest to lowest (Drag and Drop)

2.3 X 10³
1.5 X 10⁶
3.2 X 10⁻⁴
4.6 X 10⁷
3.9 X 10⁻²

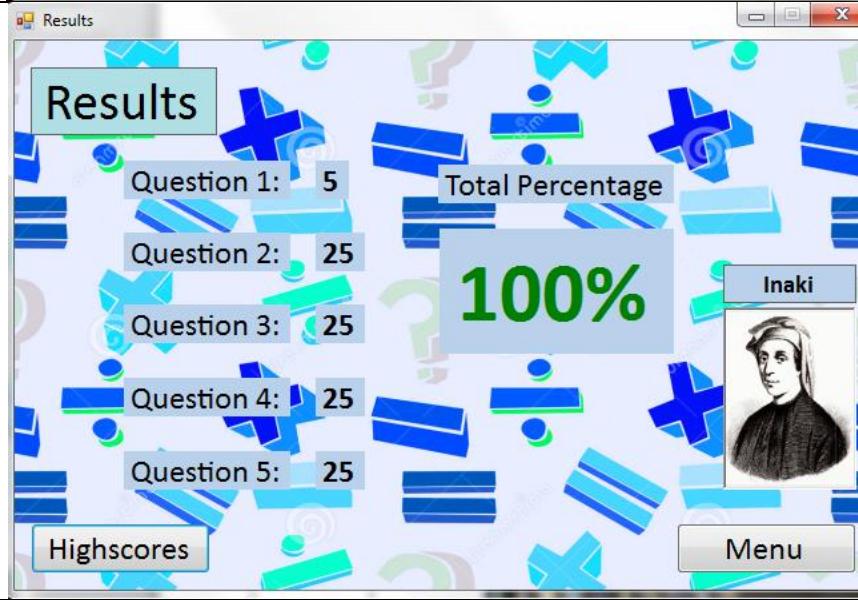
inaki

Blackboard Next

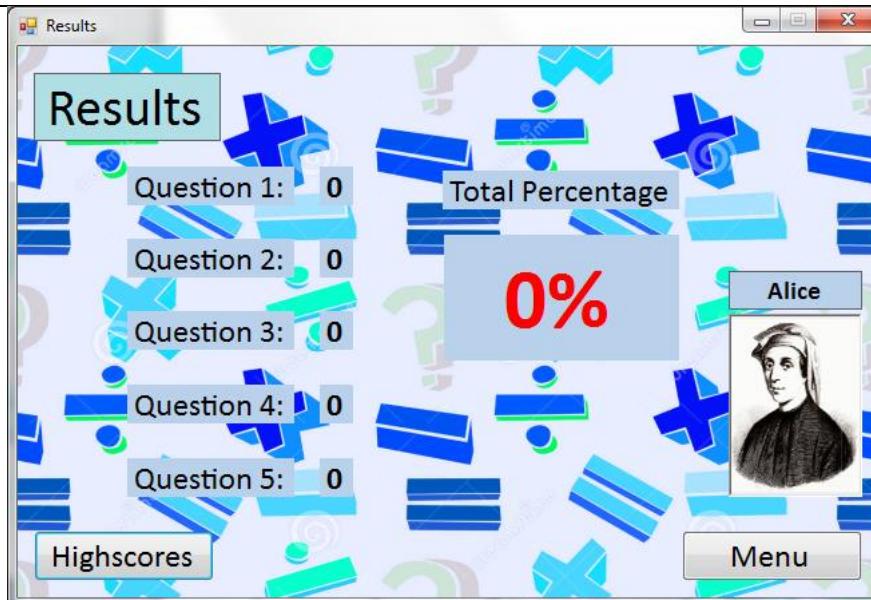
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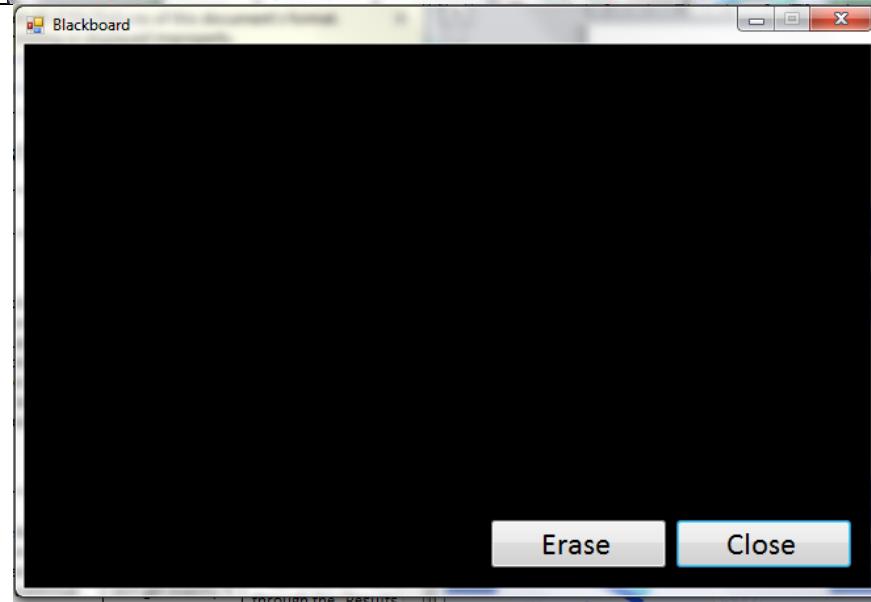
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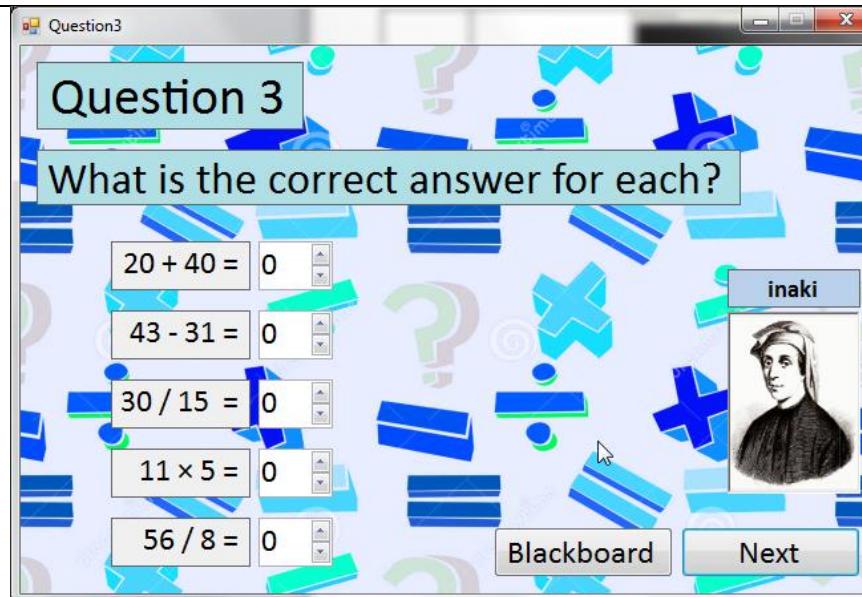
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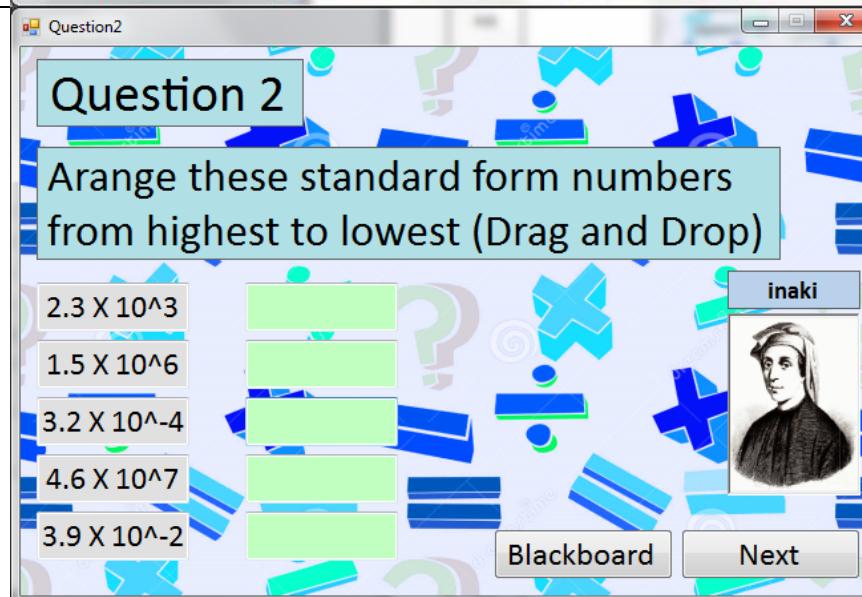
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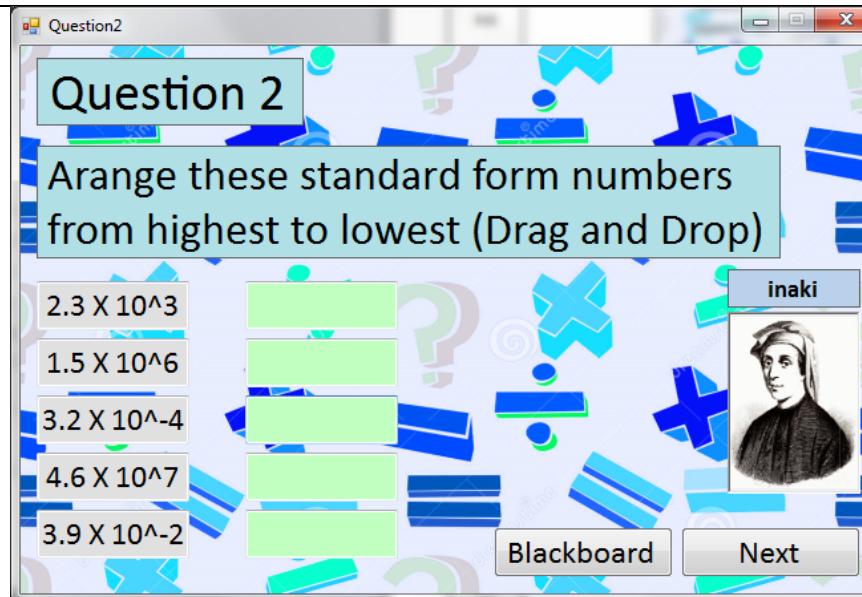
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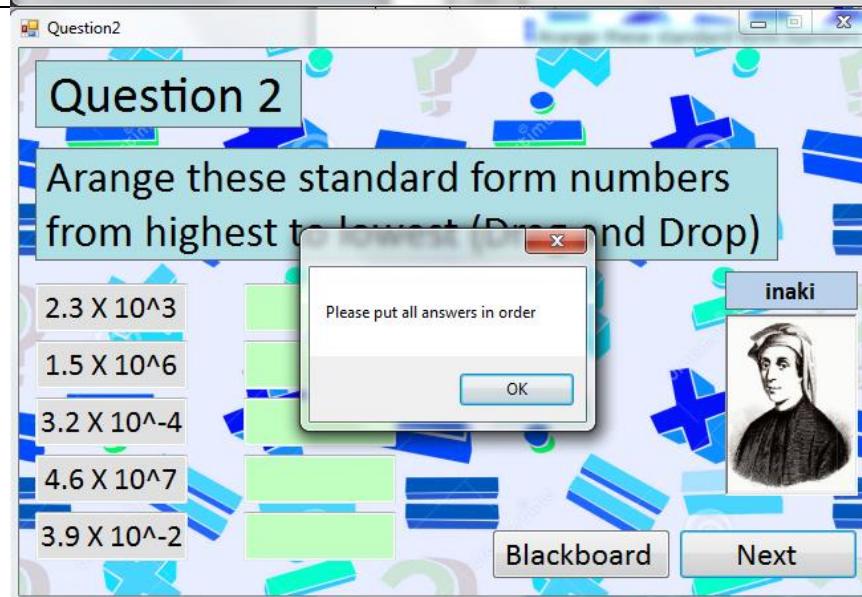
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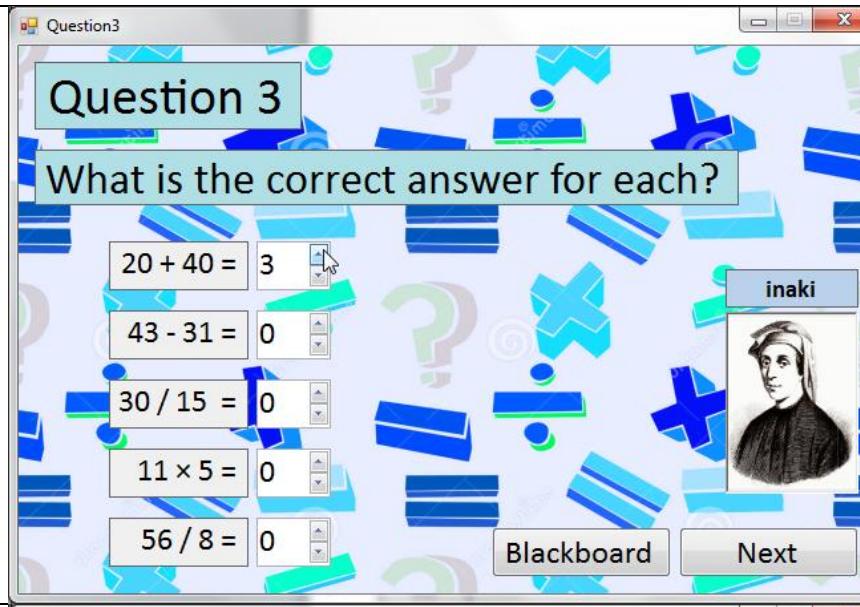
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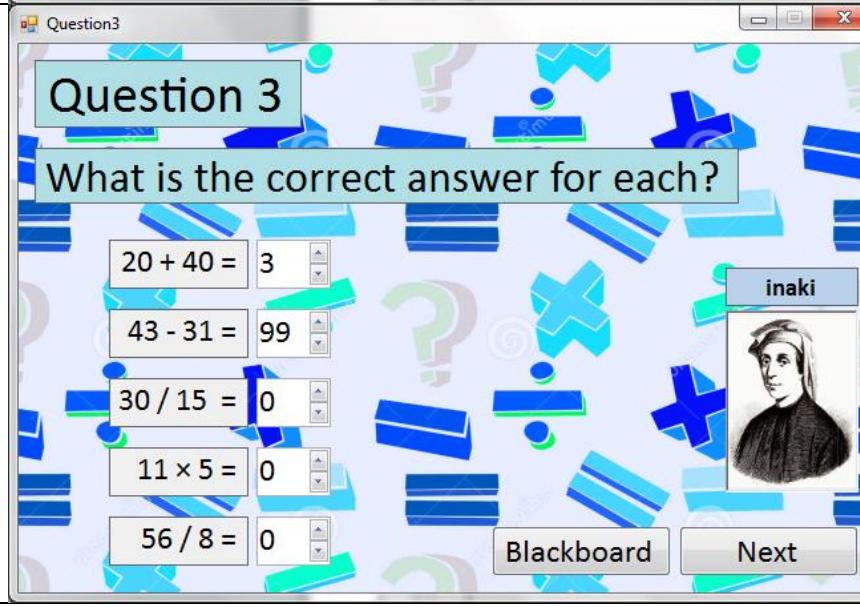
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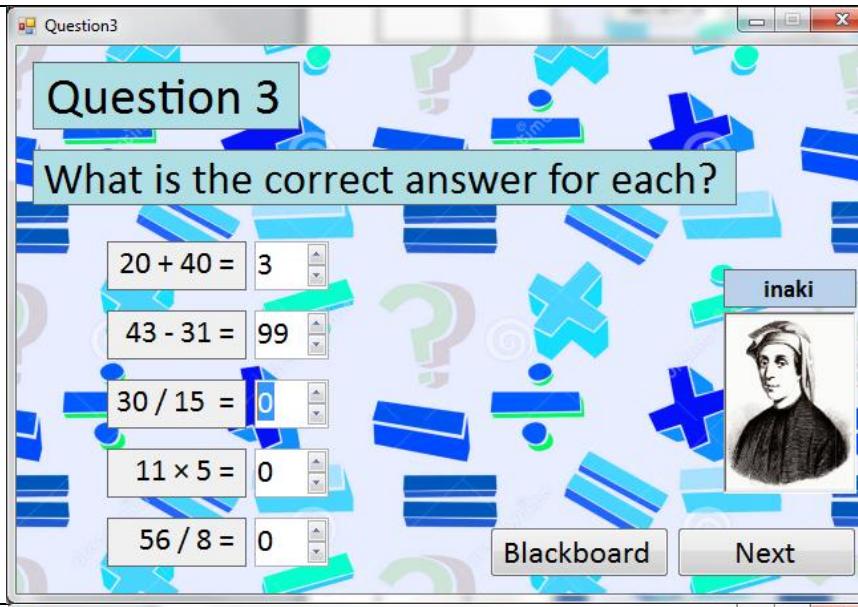
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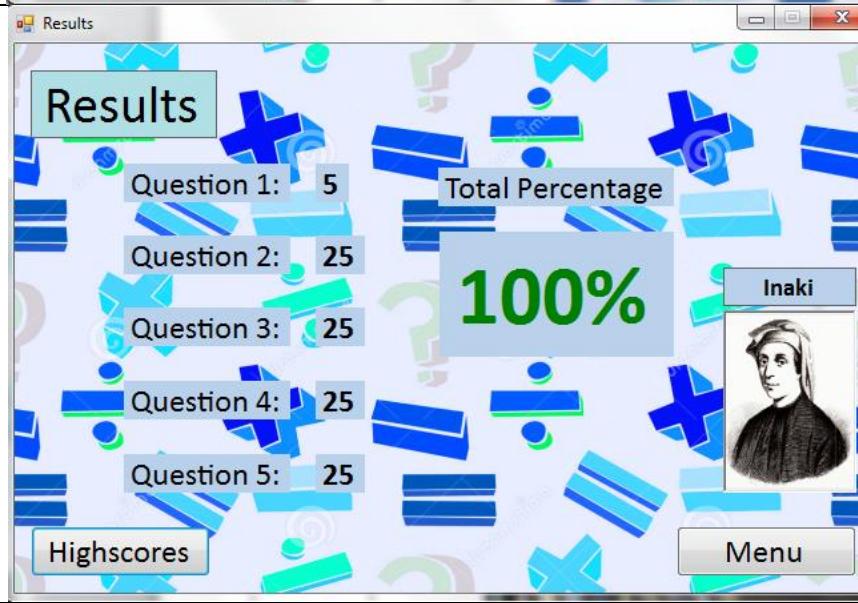
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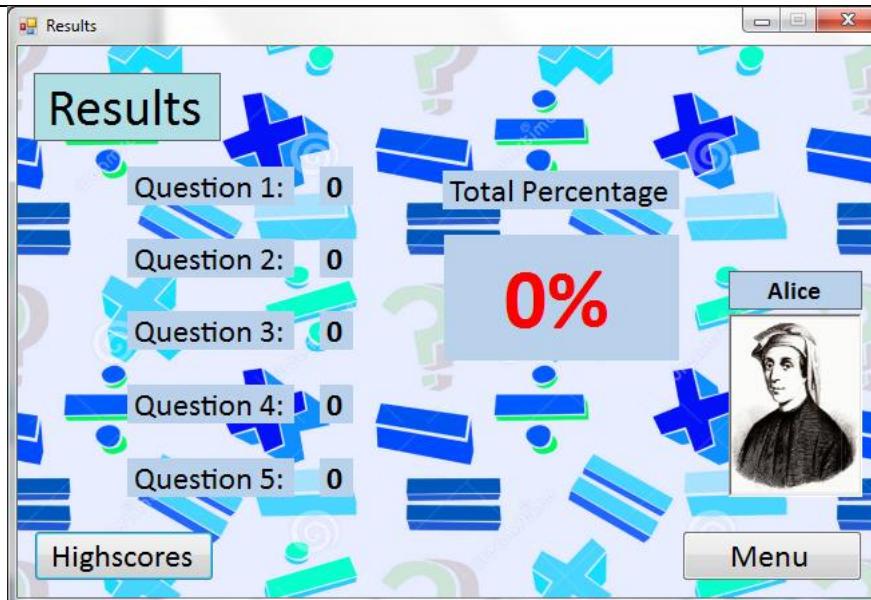
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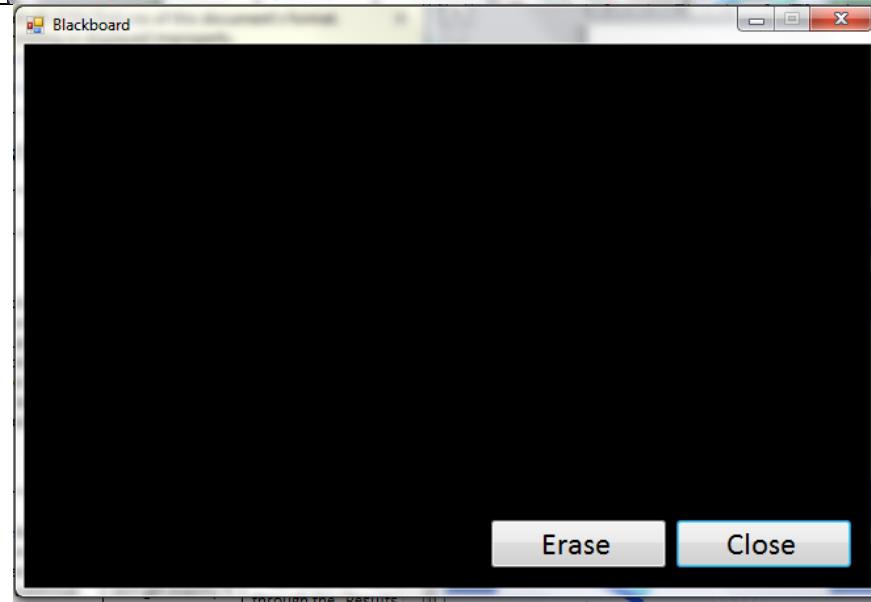
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5.5



5.6



5.7

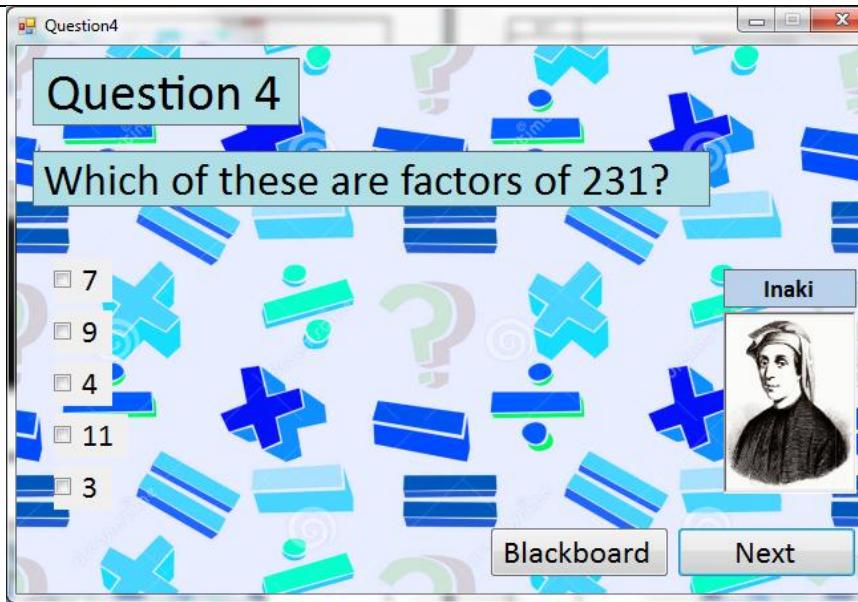
Question 4

Which of these are factors of 231?

- 7
- 9
- 4
- 11
- 3

Inaki

Blackboard Next



5.8

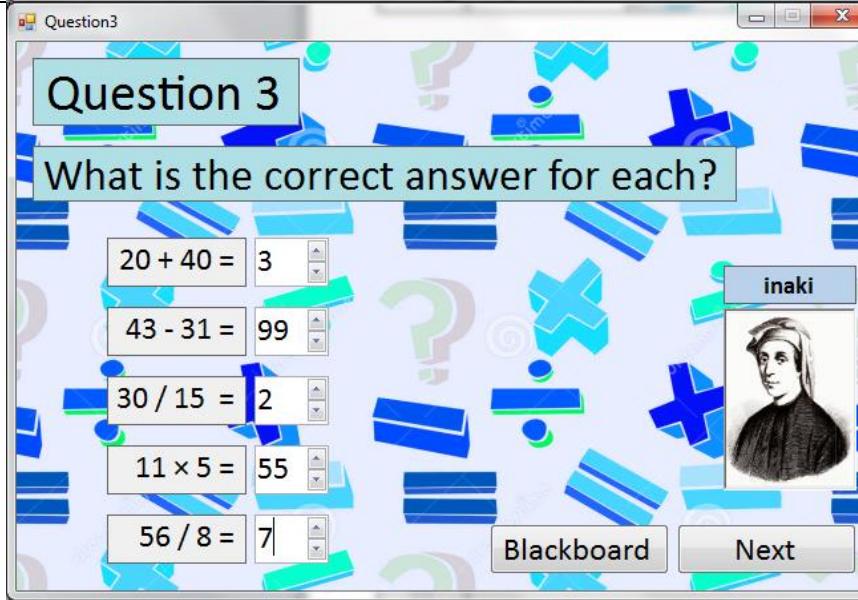
Question 3

What is the correct answer for each?

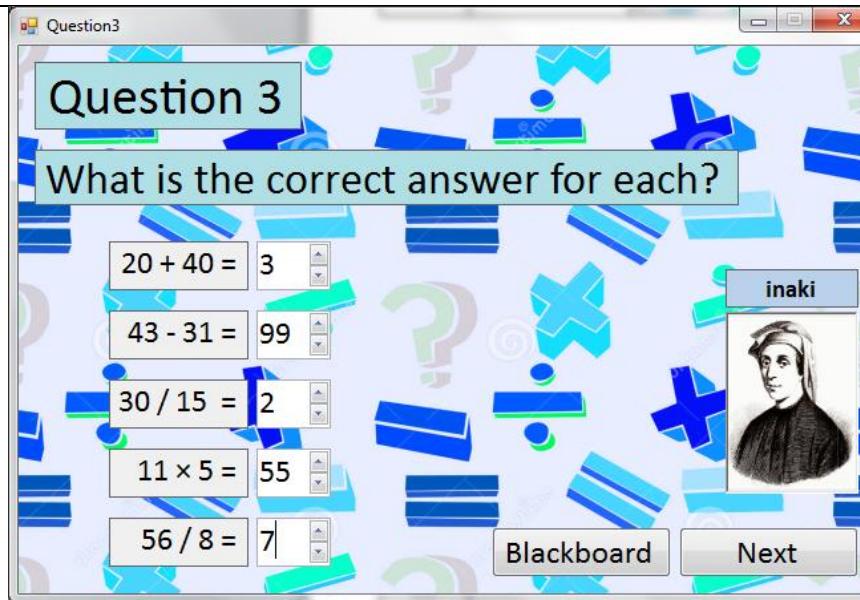
$20 + 40 =$	3
$43 - 31 =$	99
$30 / 15 =$	2
$11 \times 5 =$	55
$56 / 8 =$	7

inaki

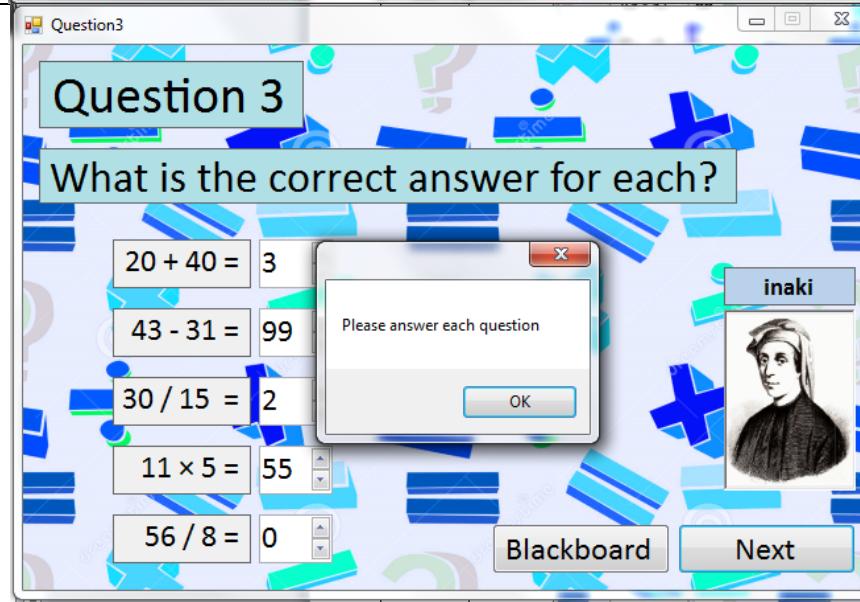
Blackboard Next



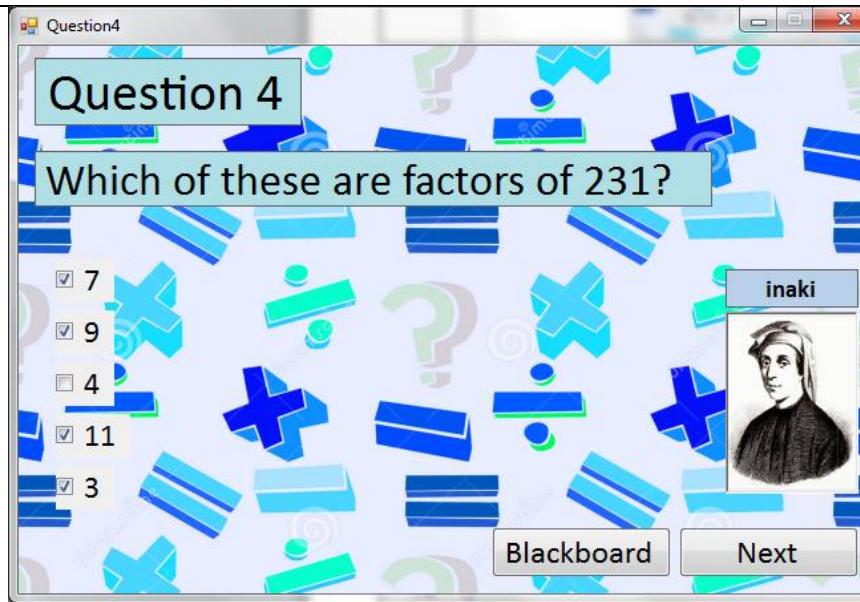
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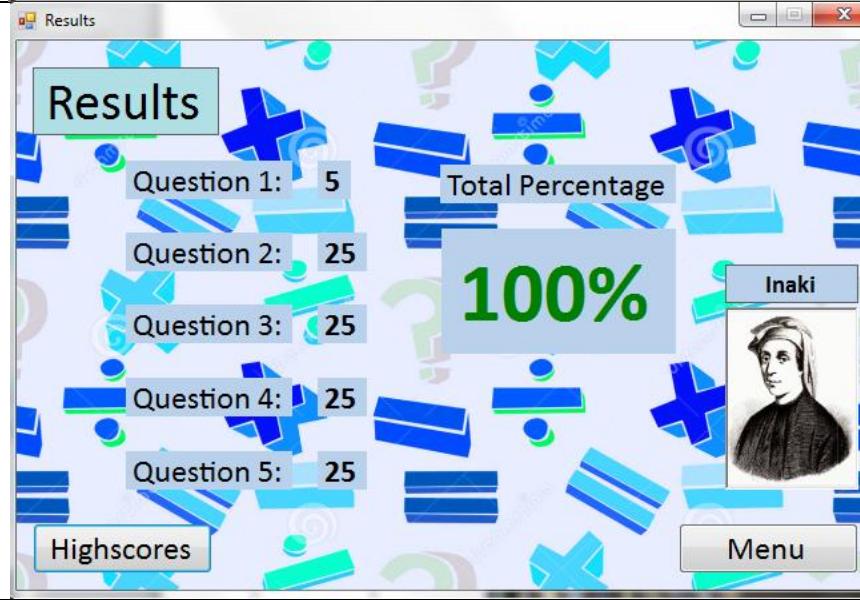
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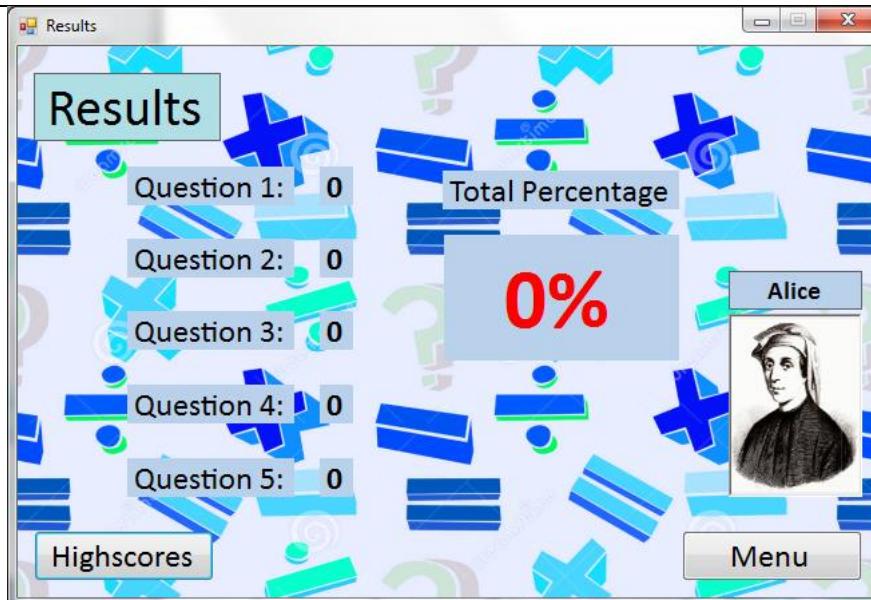
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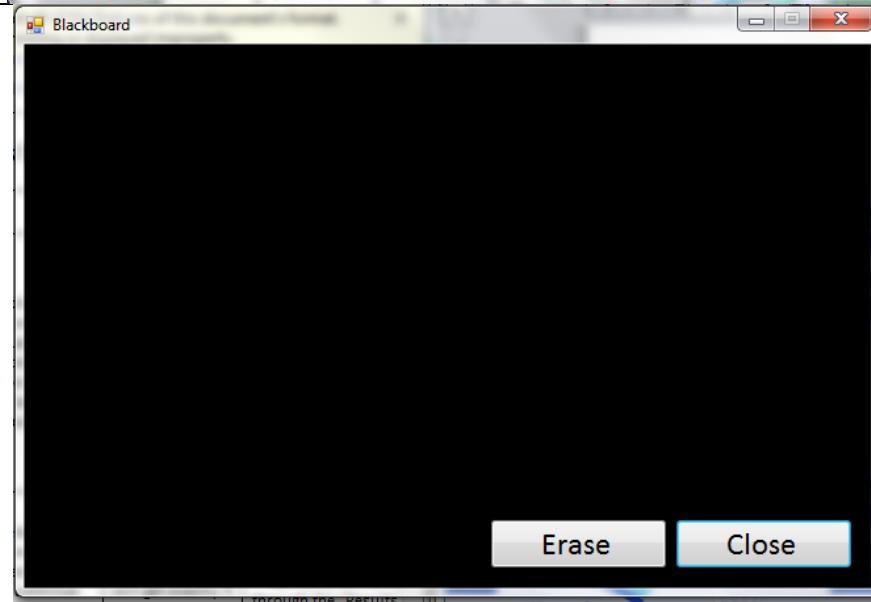
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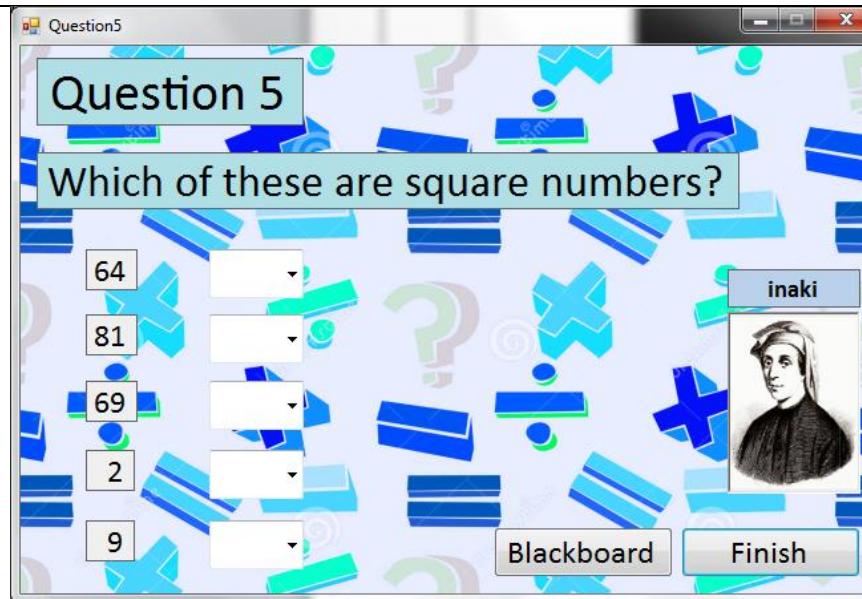
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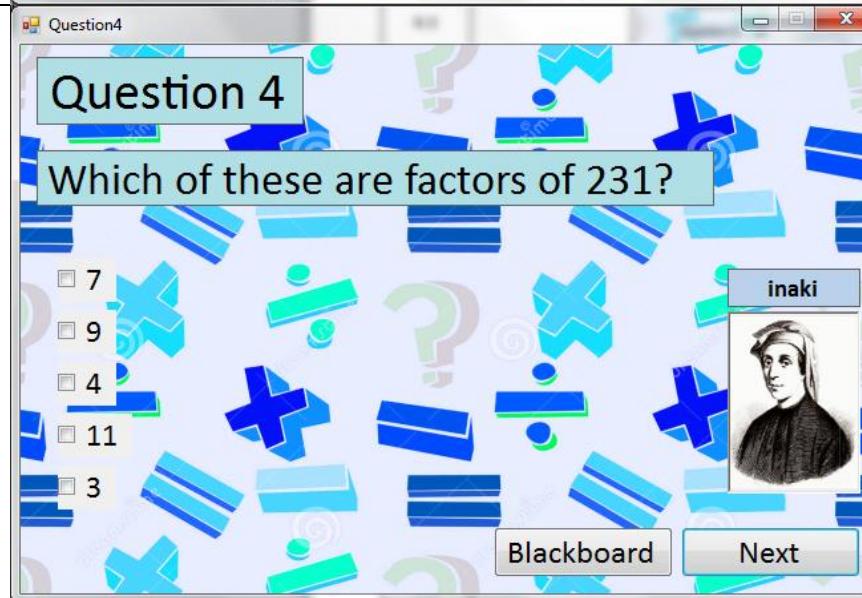
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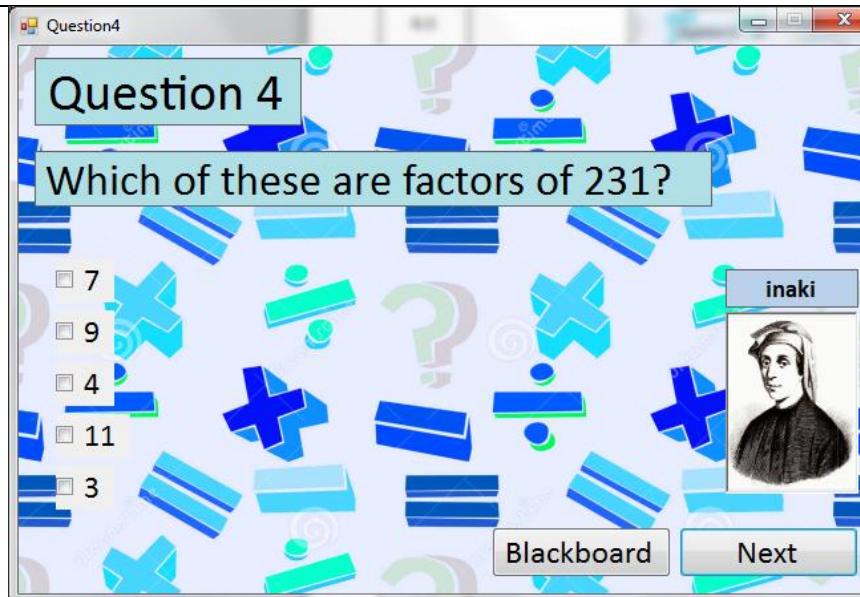
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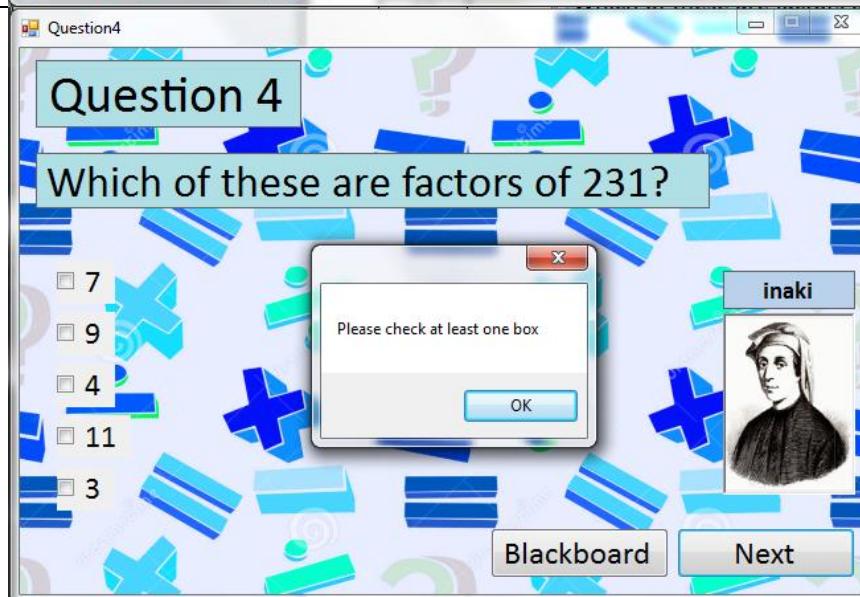
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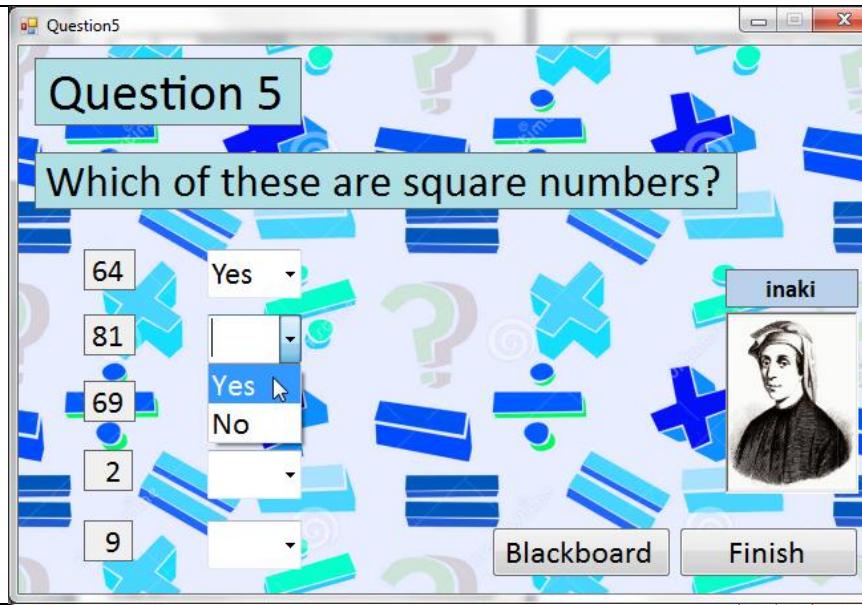
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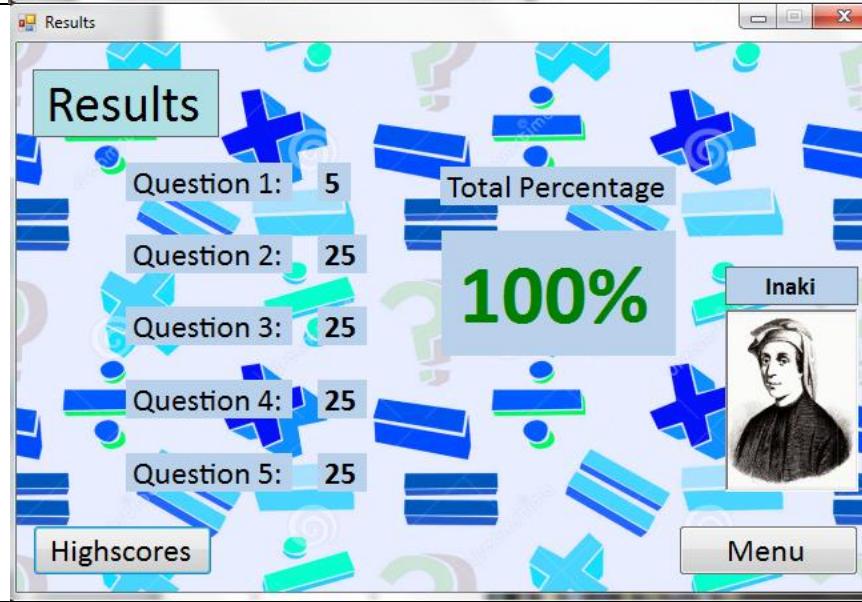
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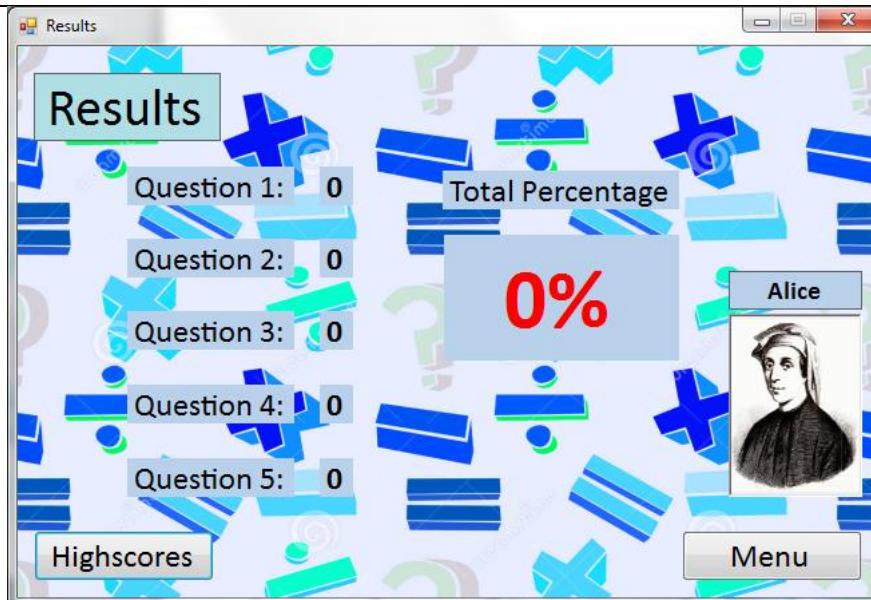
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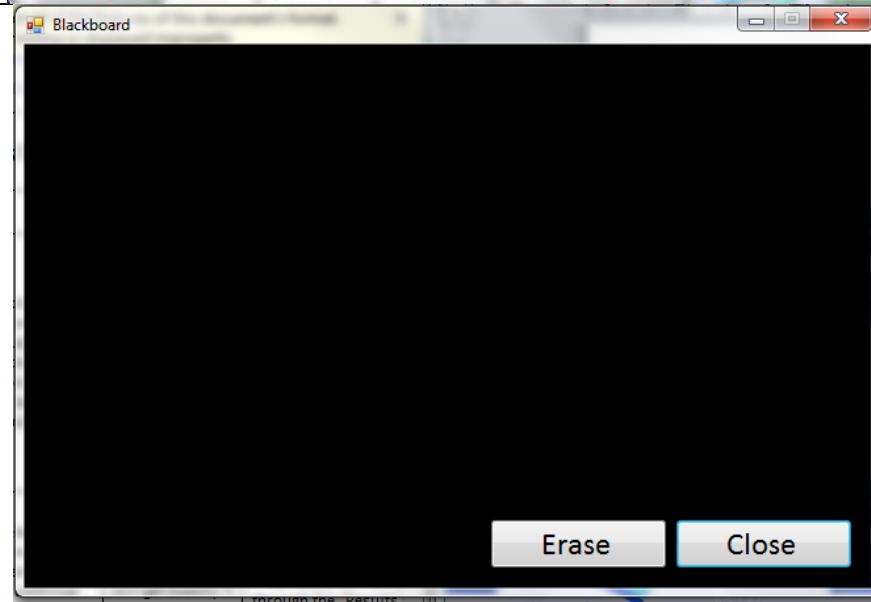
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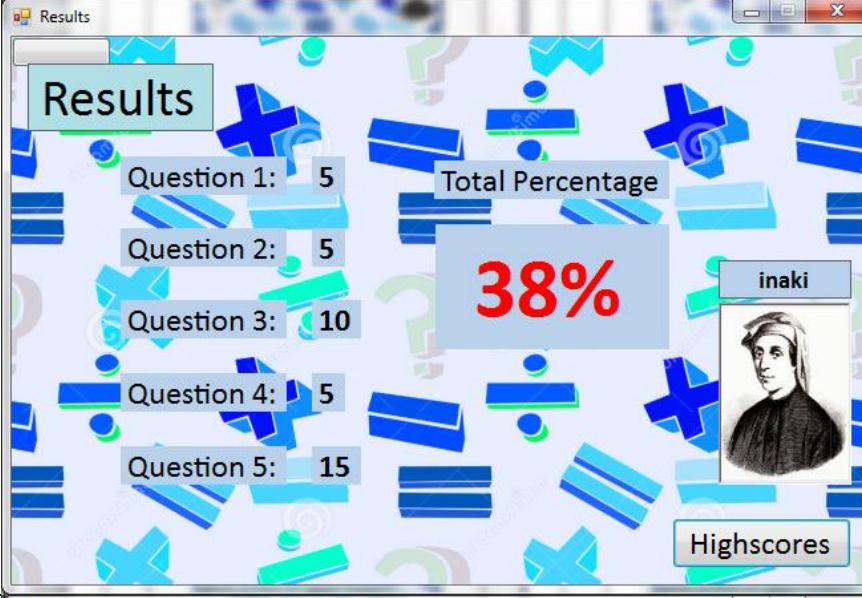
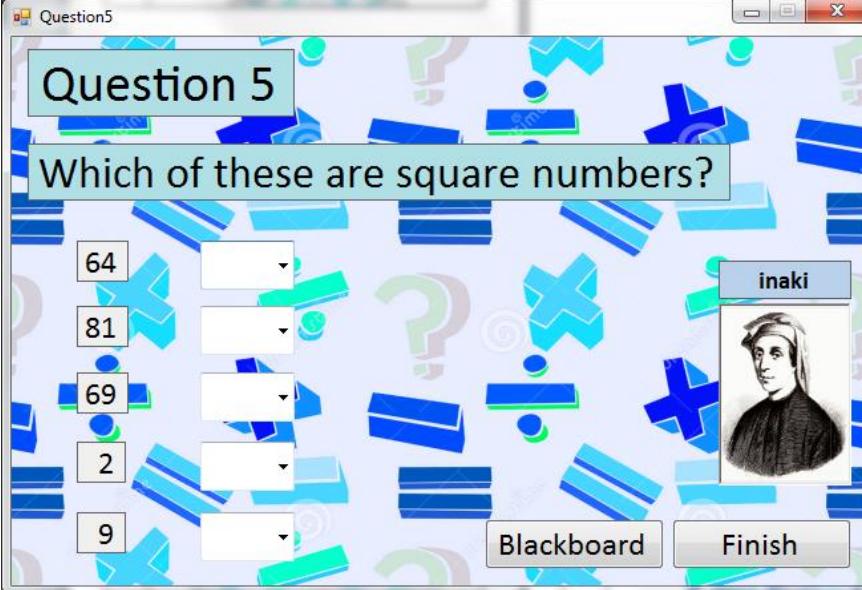


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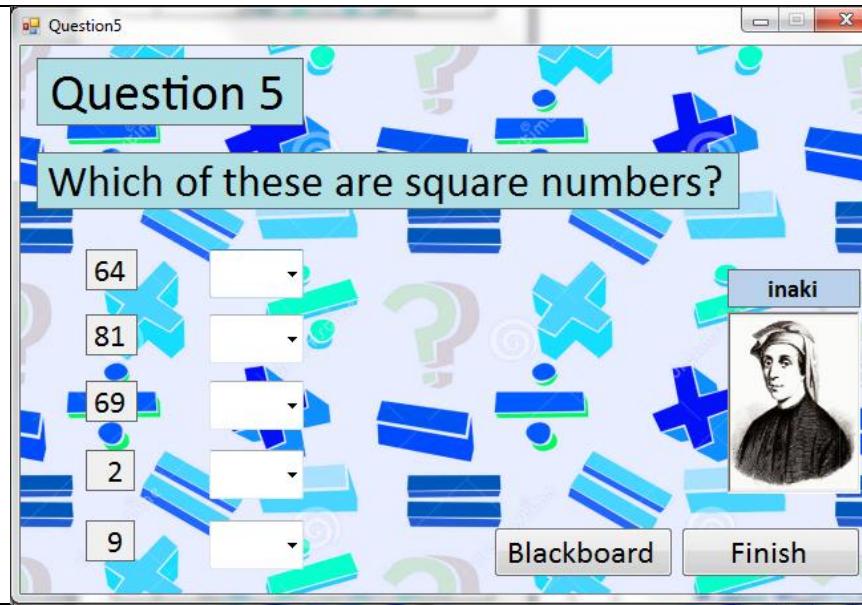


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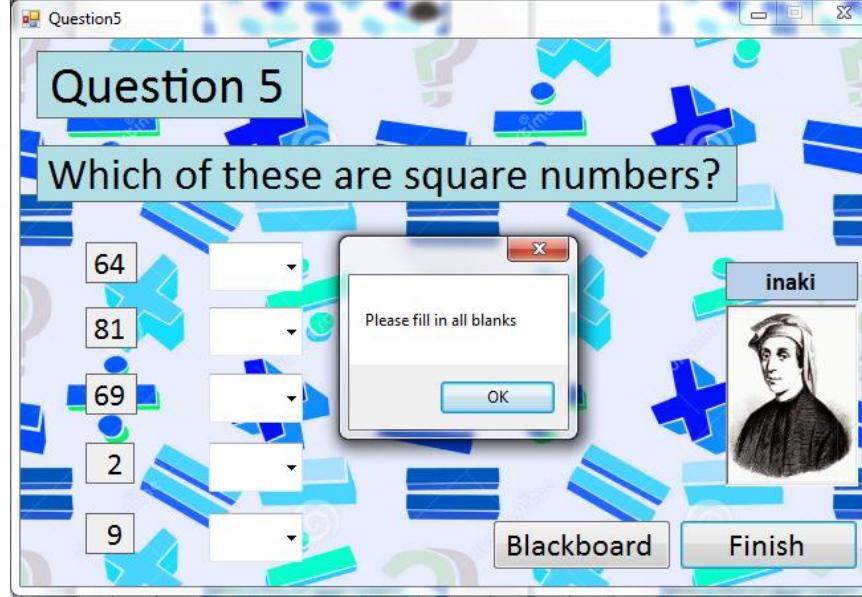


	 <p>Results</p> <p>Question 1: 5 Total Percentage Question 2: 5 38% Question 3: 10 Question 4: 5 Question 5: 15</p> <p>inaki</p> <p>Highscores</p>
7.5	
	 <p>Question 5</p> <p>Which of these are square numbers?</p> <p>64 81 69 2 9</p> <p>inaki</p> <p>Blackboard Finish</p>
7.6	

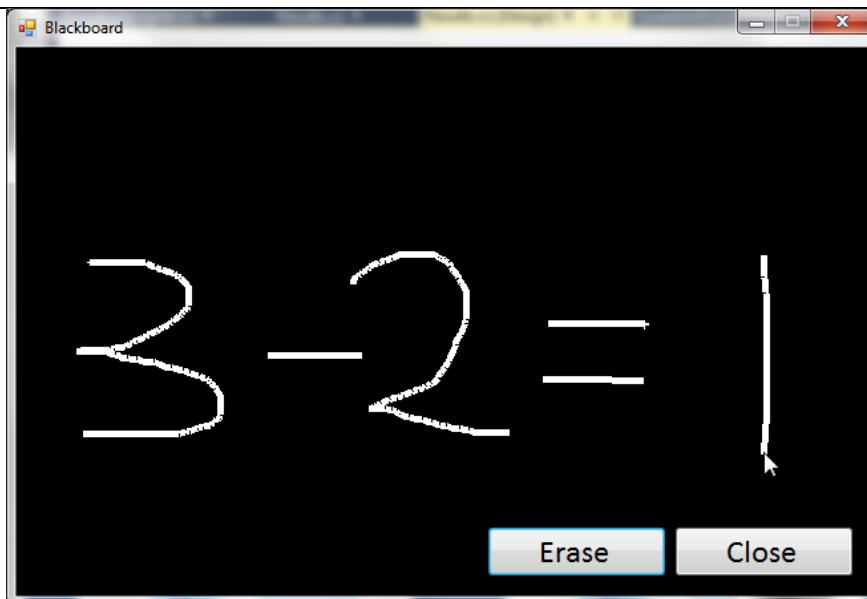
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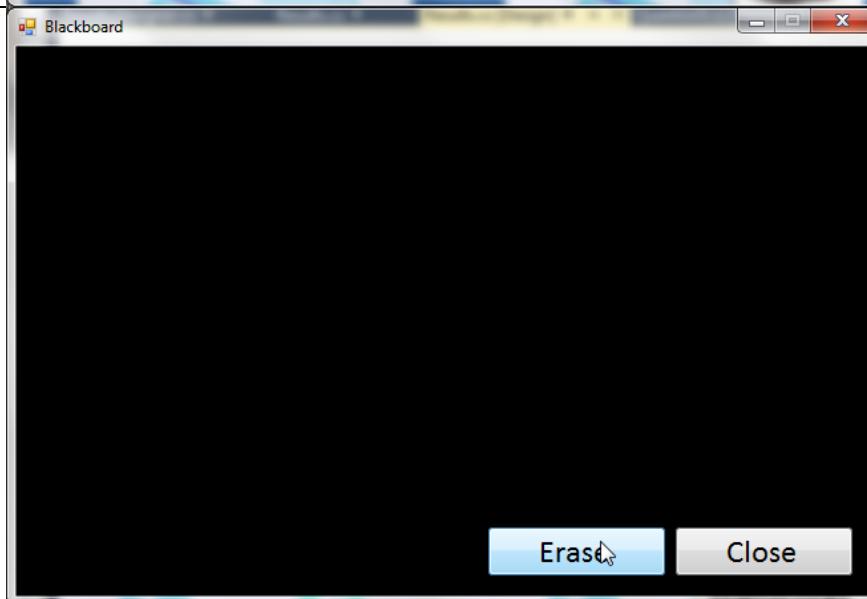
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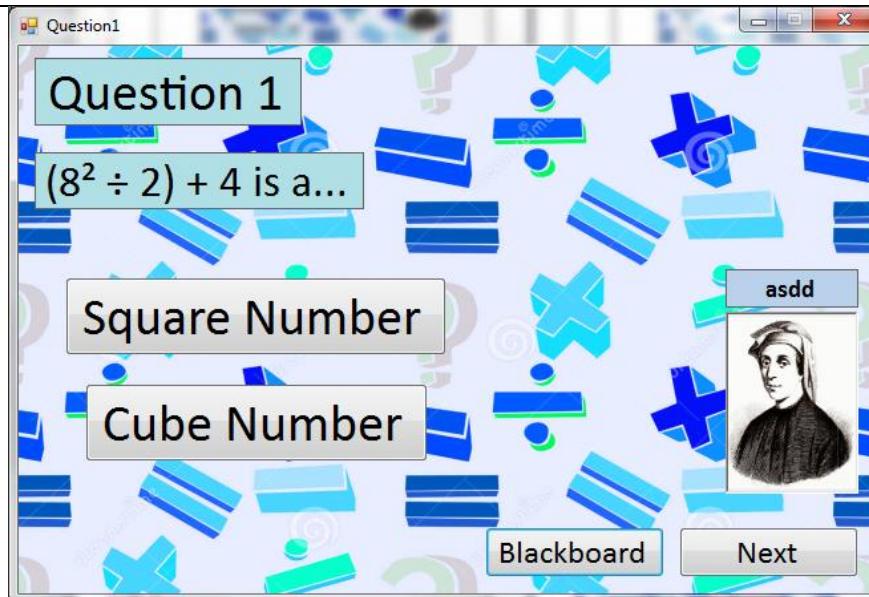
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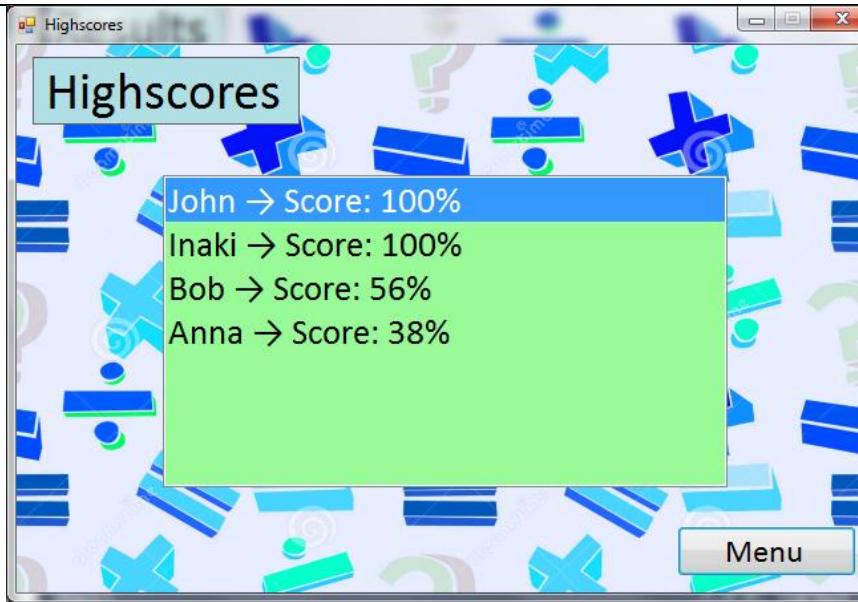
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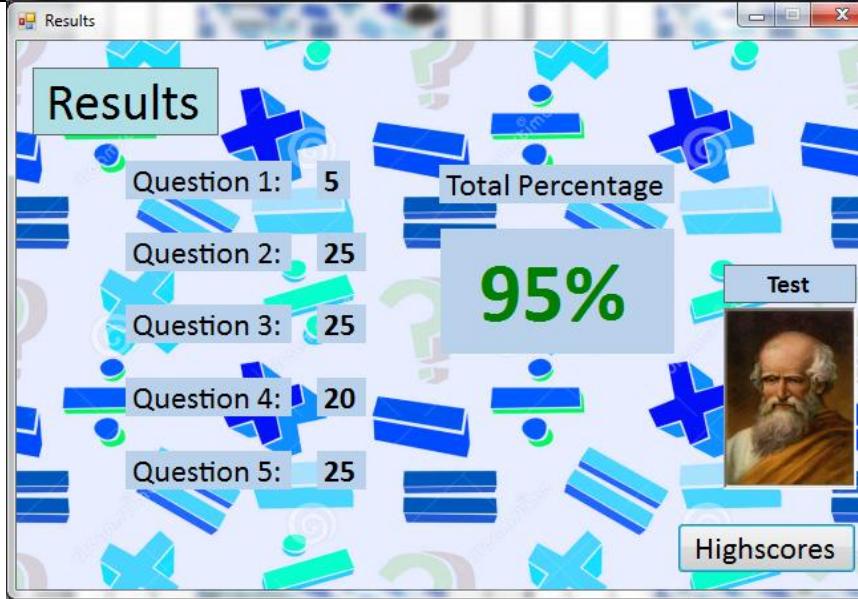
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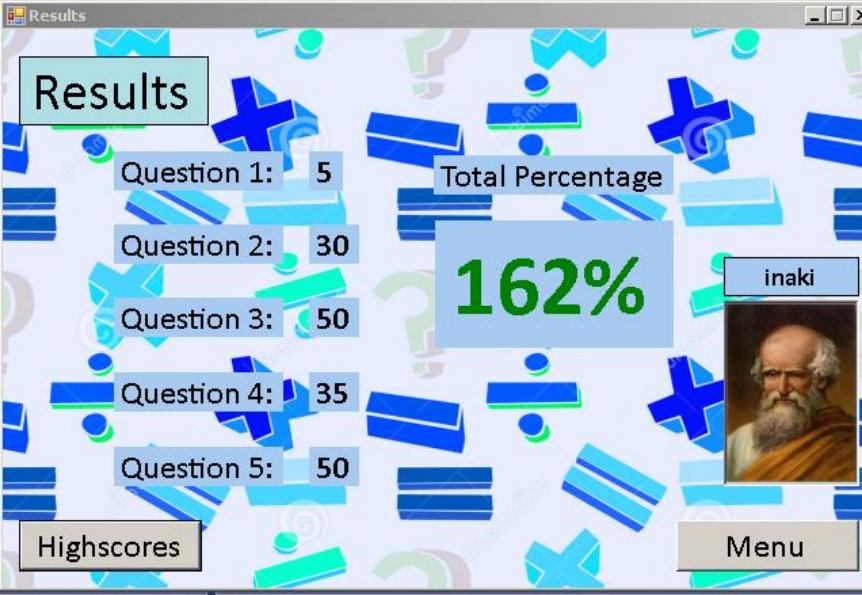
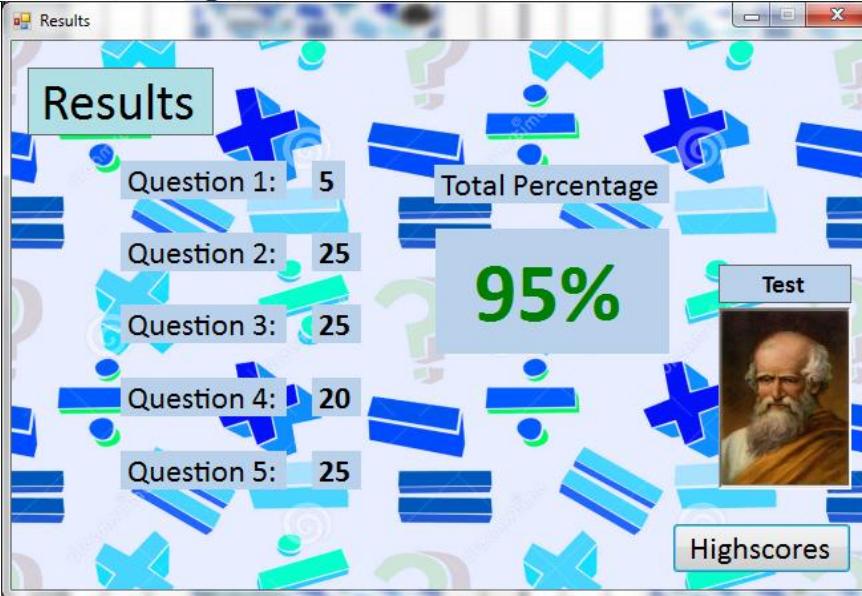
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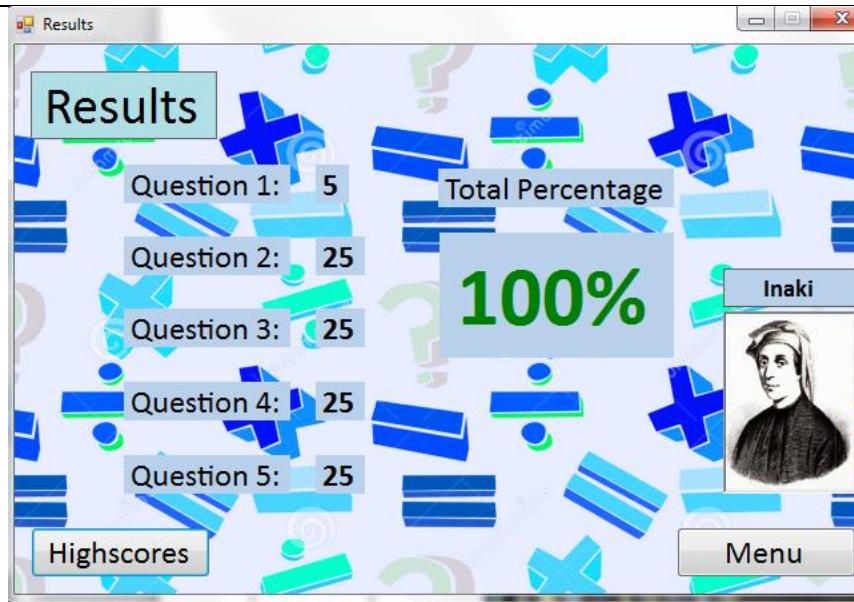
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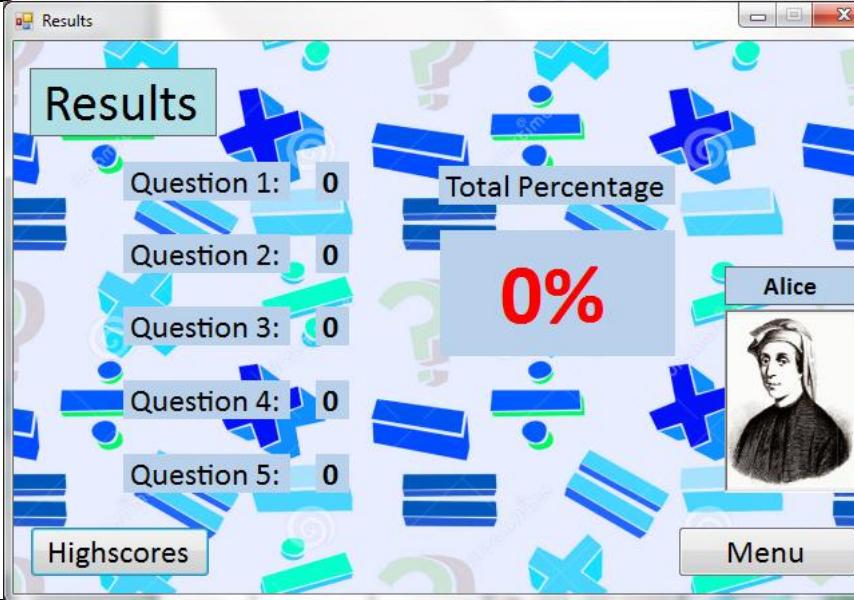
10.3		

10.5	 <p>Results</p> <p>Question 1: 5 Question 2: 30 Question 3: 50 Question 4: 35 Question 5: 50</p> <p>Total Percentage: 162%</p> <p>inaki</p> <p>Highscores Menu</p>
10.6	 <p>Results</p> <p>Question 1: 5 Question 2: 25 Question 3: 25 Question 4: 20 Question 5: 25</p> <p>Total Percentage: 95%</p> <p>Test</p> <p>Highscores</p>

10.7



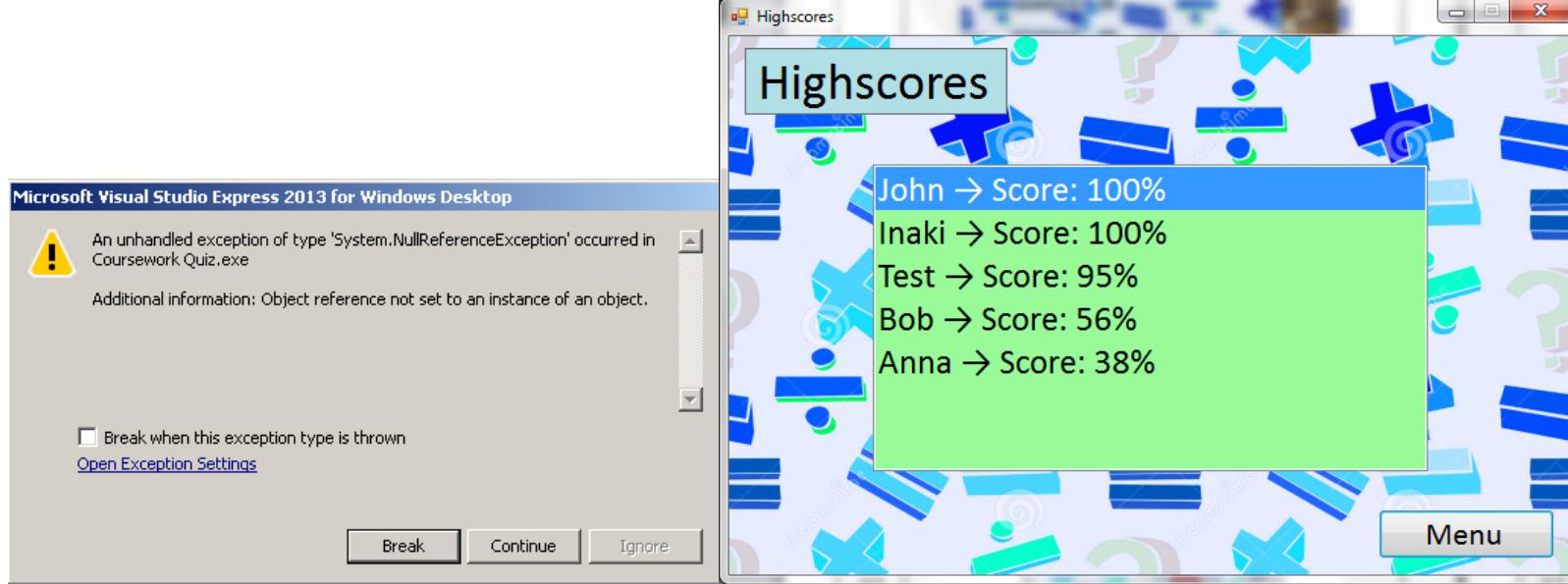
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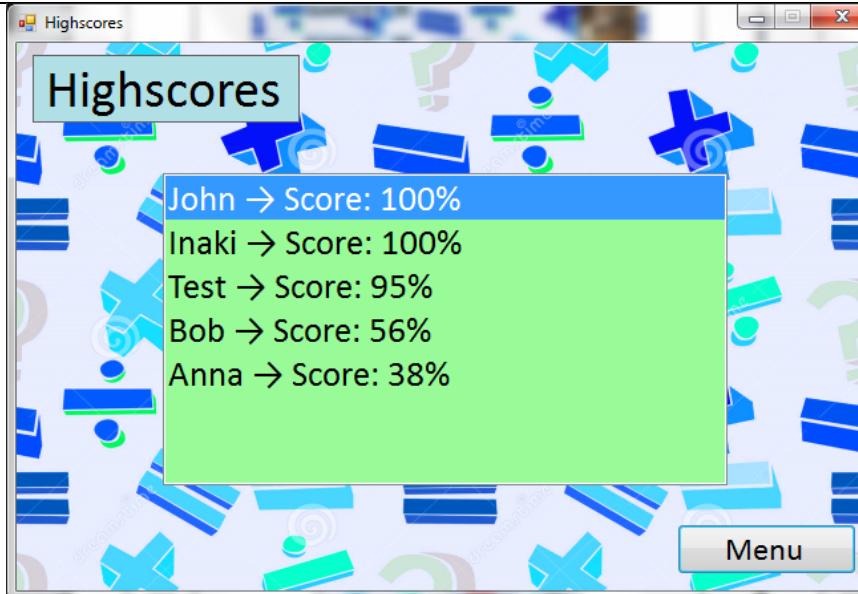
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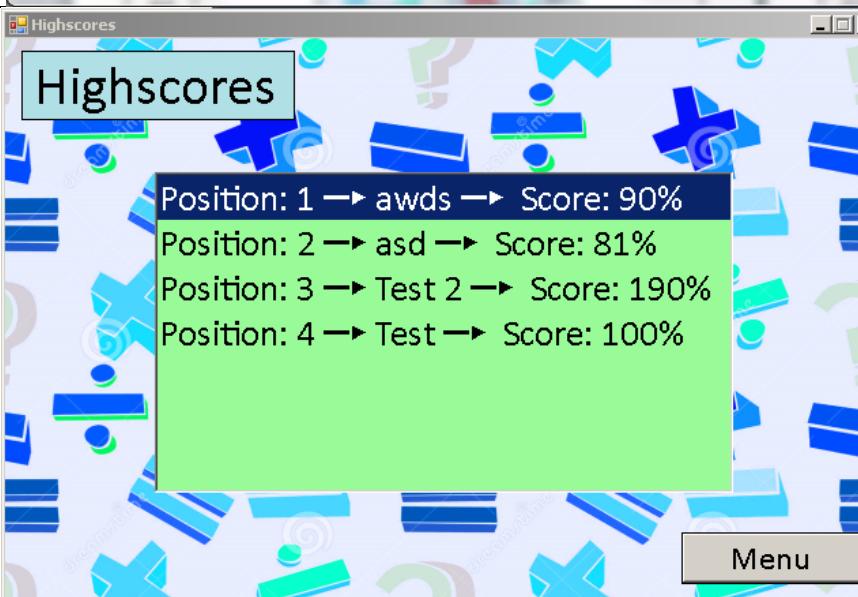
11.2



11.3



11.4



11.5

