Appinventor vragen

Module 1: Introduction

“I have a dream” worksheet vragen:

1. App Inventor has two main windows. What are they and what do you do with them?
2. *Designer en Blocks. In de designer tab kun je Buttons, Images, Tekst, enz. toevoegen. In het Blocks tab kun je (zoals Micro:Bit) blokken toevoegen die ervoor zorgen dat je alles in de Designer tab een functie kan geven.*
3. 1) How do you test an app while your developing it?
4. 1) *Je kunt op je Android telefoon een app downloaden die dan de app op je telefoon toont. Ook kun je een emulator gebruiken.*

2. 2) How can you install an app you build to your phone?

A. 2) *Je kunt de app downloaden vanaf de appinventor app.*

2. 3) What if you didn't have a phone, but wanted to program some apps. Could you? How?

A. 3) *Dan moet je de emulator gebruiken.*

3. For the I Have a Dream app, name a:

A. *Visible component : Button, TextBox*

*Non-visible component : Accelerometer, Sound*

*Property : Label*

*Event : When … .Click*

*Event-handler : When … do*

*Function call : Call*

*Conditional : If / if else*

4. What is an event handler? What does it consist of?

A. *Een Event Handler is een blok dat iets doet wanneer er iets gebeurd.*

5. An app consists of its user interface and its behavior. What does an app’s behavior consist of?

A. Een apps gedrag is hoe de app reageert op evenementen.

Quiz 1 :

1. Name and define three ways in which the Android platform is more open than iOS (iPhone). Which of these is key to why App Inventor was developed for Android?
2. *Android is meer open. Je kunt in je telefoon de source code veranderen.*

2. Sketch the blocks for an app that has the following qualities:

- Has one button called Button1

- The image on Button1 changes each time it is clicked

- The order of the images displayed when clicked are Obama, then Romney, then Clinton, then obama, and so on.

A. ***When*** *Button1.Click:*

***Do******if*** *Button1.image = “Obama.jpg”*

***then*** *set Button1.image to “Clinton.jpg”*

***else*** *if Button1.image = “Clinton.jpg”*

***then*** *set Button1.image to “romney.jpg”*

***else*** *set Button1.image to “Obama.jpg”*

3. In the following blocks, circle and label the following:

* The Event
* The Event-Handler
* The Function-Calls
* The Parameter

A. *The Event = When Button1.Click do*

*The Event-Handler = Alles bij elkaar*

*The Function-Calls = Call blokken*

*The Parameter = Blauwe blok met 500*

4. Define the term parameter in the context of an App Inventor app.

A. *Ze zorgen voor de informatie die de functie nodig heeft.*

Module 2: Build Drawing and Animated Games.

The Canvas Component :

1. In a traditional coordinate system, how does Y change when you move down? In App Inventor's Canvas, how does Y change when you move down?

A. *Normaal wordt Y kleiner als je naar beneden gaat. In appinventor wordt Y groter als je naar beneden gaat.*

2. What location does X=1,Y=0 represent in an App Inventor Canvas?

A. *Boven links*

3. What does "Fill parent" mean in terms of setting the Width of the Canvas?

A. *Dat betekent dat het Canvas de volledige breedte van het scherm(de parent) moet gebruiken.*

Paint Plot Preview :

1. Take a look at the picture of the PaintPot app. What components do you think you will you need to complete this app?

A. *Een Canvas, Lables, Knoppen en Arrangements.*

2. What does [call Canvas1.Drawpoint – X, Y] do?

A. *Het zet een punt op die bepaalde X en Y coördinaat.*

3. What does [call Canvas1.Drawtext – tekst, X, Y]

A. *Het zet een bepaalde tekst op dat X en Y coördinaat neer.*

4. What does [call Canvas1.Drawcircle – centerX, centerY, radius, fill:true] do?

A. *Het tekent een opgevulde cirkel op dat X en Y coördinaat met een radius.*

5. What does [call Canvas1.Drawline – x1, y1, x2, y2] do?

A. Tekent een lijn tussen de opgegeven coördinaten.

6. Which Event Handler do you think should trigger drawing a line?

A. *When Canvas1.Dragged do…*

7. Which Event Handler do you think should be trigger drawing a circle?

A. *When Canvas1.Touched do…*

Quiz 2 :

1. What is a variable?

A. *Een cel waarin je informatie kunt opslaan.*

2. In the PaintPot app we needed a variable to keep track of the circle size, however, we did not use one for keeping track of the line size. Why?

A. *Voor de lijn gebruik je LineWidth.*

3. In App Inventor, how are a variable and a property similar? How are they different?

A. *Ze zijn beide cellen waarin je informatie kan opslaan. Maar een property is deel van een component.*

4. Circle and label the event parameters and function parameters in the following blocks.

A. *Event parameters:*

*- x, y, touchedsprite*

*- startX, startY, prevX, enz….*

*Function parameters:*

*- getX, getY, 5*

*- get prevX, get prevY, enz…*

*5.* Assume we make a small modification to Canvas1's drawLine function. We decide to change x1 to be set to startX and y1 to be set to starty. How would this change the behavior of the app?

*A. Lijnen komen vanaf hetzelfde punt en eindigen op allemaal verschillende punten.*

6. Consider a drawing app like PaintPot which allows the user to draw circles and lines. In this app, there are two textboxes, dotSizeText and lineWidthText, and two buttons, dotSizeButton and lineWidthButton. The user can control the size of the drawn circles and lines by modifying the textboxes and clicking on the submit buttons. Note that the sizes of the circles and lines drawn should not change until the user clicks on the respective submit buttons.  
Define the behavior for this app by drawing the completed DotSizeButton.Click, and LineWidthButton.Click event handlers. The needed blocks are shown below.

A. *Initialize global dotsize to 1*

*When Canvas1.Dragged do:*

*Call Canvas1.Drawline:*

*X1 = get prevX*

*Y1 = get prevY*

*X2 = get currentX*

*Y2 = get currentY*

*When LineWidthButton.Click do:*

*Set Canvas1.LineWidth to LineWidthText.Text*

*When Canvas.Touched do:*

*Call Canvas1.drawcircle:*

*X = getX*

*Y = getY*

*R = get globaldotsize*

*When DotSizeButton .Click do:*

*Set global Dotsize to Dotsize .text*

The Clock.Timer Event: How does it work?

1. How would you play a sound every 5 seconds?

A. *Door de timerinterval op 5000 te zetten. (5000ms = 5sec.)*

MoleMash App Conceptualize and Customize

1. Name the event that is not a user-initiated or external event.

A. *When Screen1 .initialize*

2. What function call blocks are used to move an image sprite within the canvas?

A. *Call AndroidSprite .moveto*

3. If you didn't have a MoveTo block, what blocks could you use to move the mole?

A. *Set position*

4. What is the unit of measurement for location on the canvas?

A. *De canvas breedte en hoogte (fill parent of pixels)*

5. The version of MoleMash shown above defines a procedure. What is the name of the procedure? Could you code MoleMash without defining the procedure?

A. *MoveRandom, je kunt wel zonder maar dan moet je die blokken vaker invoeren wat veel tijd kost.*

6. Describe the effect of the blocks within the MoveMole procedure. Why is the subtraction performed?

A. *Dan blijft hij niet op dezelfde plek*

7. The X and Y property of an image sprite specify the sprite location. But a sprite is not a single point, so what specific location does ImageSprite.X and ImageSprite.Y denote?

A. *De hoogte en breedte van de foto*

8. Sketch the blocks so that the Mole moves twice as fast each time it is touched.

A. *Gedaan*

9. When a row of blocks is performed, in what order are the blocks executed?

A. *Van boven naar beneden.*

Quiz 3

1. What events does the MoleMash app respond to?

A. *Op Canvas.Touched, ImageSprite.Touched, Clock.Timer*

2. What properties of an ImageSprite (or Ball) are used to record its location? What does each represent?

A. *Op de X en Y properties, X is horizontaal en Y is verticaal.*

3. What is the purpose of the subtractions in the blocks below?

A. Zorgt ervoor dat de plaatjes niet onder elkaar komen.

4. Assume a Canvas has imageSprite1 on it. When the user touches imageSprite1, what events are triggered?

A. *ImageSprite.Touched en Canvas.Touched*

5. Sketch the blocks for a "countdown" app that:

a. Displays the number 10 (in label CountLabel) when the app begins.

b. Subtracts 1 from the number each second, so it shows 10, then 9, then 8, etc.

c. When the number reaches 0, the countdown stops.

d. When the user clicks the restartButton, 10 is redisplayed and the countdown restarts.

A. *when RestartButton.Click do:*

*Set CountLabel .text to 10*

*Set Clock1 .Timer to true*

*When Clock1 .Timer do :*

*Set CountLabel.text to Countlabel.Text – 1*

*If Countlabel.Text = 0*

*Set Clock1.TimerEnabled to false*

Quiz 4

1. Sketch the blocks for making a ball move diagonally from the bottom-right corner to the top-left corner. You can assume the ball starts in the bottom-right corner. The ball should move gradually, but for this question you need not be concerned with speed or the size of the timer interval.

A. *When Clock1.Timer do :*

*Call ball1.MoveTo :*

*X = Ball1.X – 5*

*Y = Ball1.Y – 5*

2. Sketch the blocks for making a ball move down at a speed of 30 pixels a second. The ball should move smoothly so specify an appropriate timer interval (you do not need to show the blocks, just note what you will set the timer interval to in the designer).

A. *Zet de Clock2.TimerInterval op 50*

3. Sketch the blocks for making a ball move horizontally, back and forth, continuously. When the ball hits the right edge it should start going left, when it hits the left edge it should start going right.

A. *Je moet de variabele “distance” defineren dat de bal links of rechts gaat.*

4. Modify the app in question 3 so the ball goes back and forth between the left edge of the Canvas and the middle of the canvas. Assume the ball starts near the left edge (but not on it).

A. Gedaan