



coding

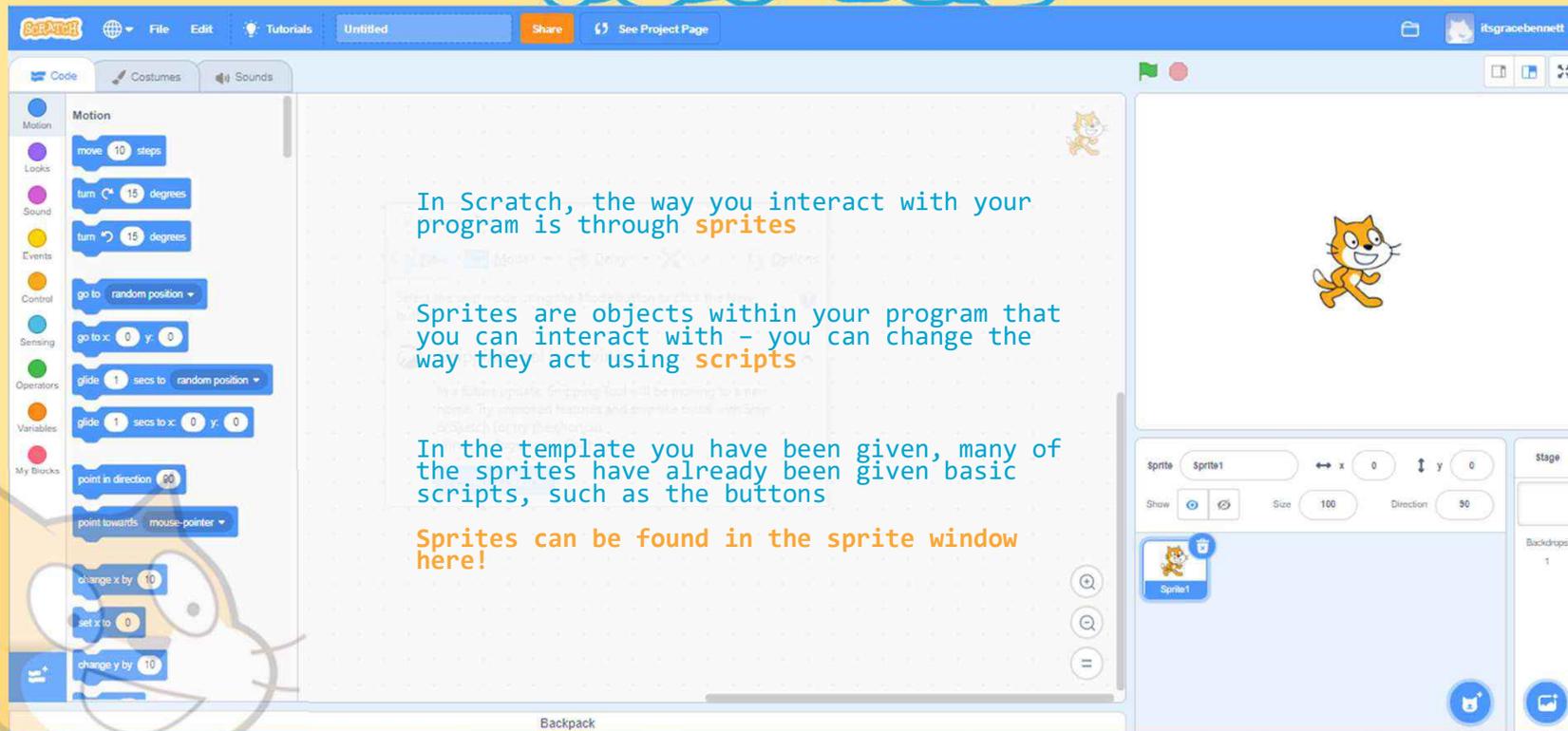
4 MIGRANT WOMEN RETURNERS



Farming and Agriculture Software

Beginner

How does SCRATCH work?



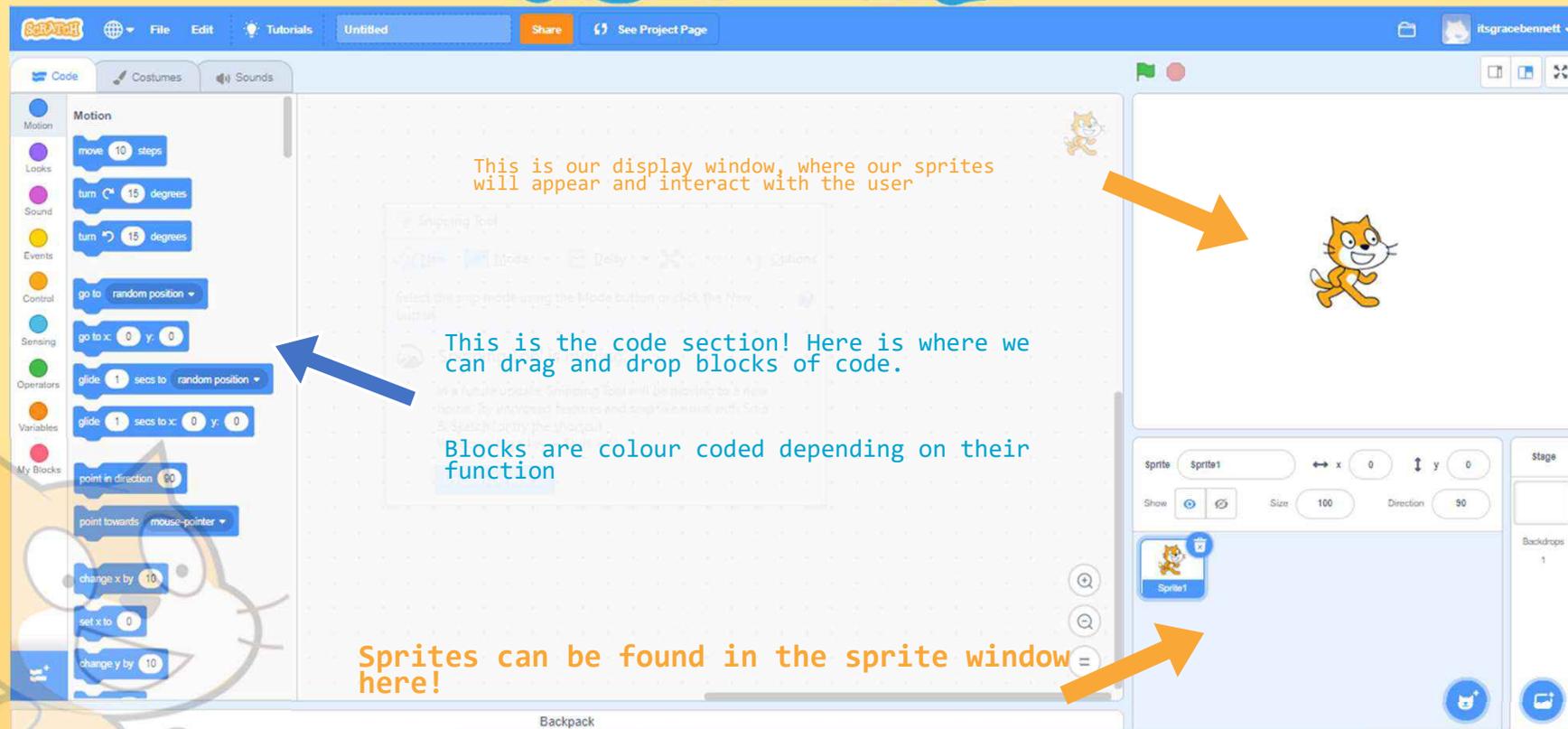
In Scratch, the way you interact with your program is through **sprites**

Sprites are objects within your program that you can interact with - you can change the way they act using **scripts**

In the template you have been given, many of the sprites have already been given basic scripts, such as the buttons

Sprites can be found in the sprite window here!

How does SCRATCH work?



The image shows a screenshot of the Scratch IDE interface. The top bar includes the Scratch logo, a globe icon, and menu options: File, Edit, Tutorials, and an 'Untitled' tab. There are also 'Share' and 'See Project Page' buttons. Below the menu bar are tabs for 'Code', 'Costumes', and 'Sounds'. The left sidebar contains a 'Motion' category with various code blocks like 'move 10 steps', 'turn 15 degrees', 'go to random position', 'go to x: 0 y: 0', 'glide 1 secs to random position', 'glide 1 secs to x: 0 y: 0', 'point in direction 90', 'point towards mouse-pointer', 'change x by 10', 'set x to 0', and 'change y by 10'. The main workspace is a grid with a small Scratch cat sprite in the top right corner. A text box in the workspace says 'This is our display window, where our sprites will appear and interact with the user'. A blue arrow points from a text box 'This is the code section! Here is where we can drag and drop blocks of code. Blocks are colour coded depending on their function' to the code blocks. An orange arrow points from a text box 'Sprites can be found in the sprite window here!' to the 'Sprite1' button in the bottom right panel. The bottom right panel shows 'Sprite1' with 'x: 0', 'y: 0', 'Size: 100', and 'Direction: 90'. The bottom of the interface has a 'Backpack' button.

This is our display window, where our sprites will appear and interact with the user

This is the code section! Here is where we can drag and drop blocks of code. Blocks are colour coded depending on their function

Sprites can be found in the sprite window here!

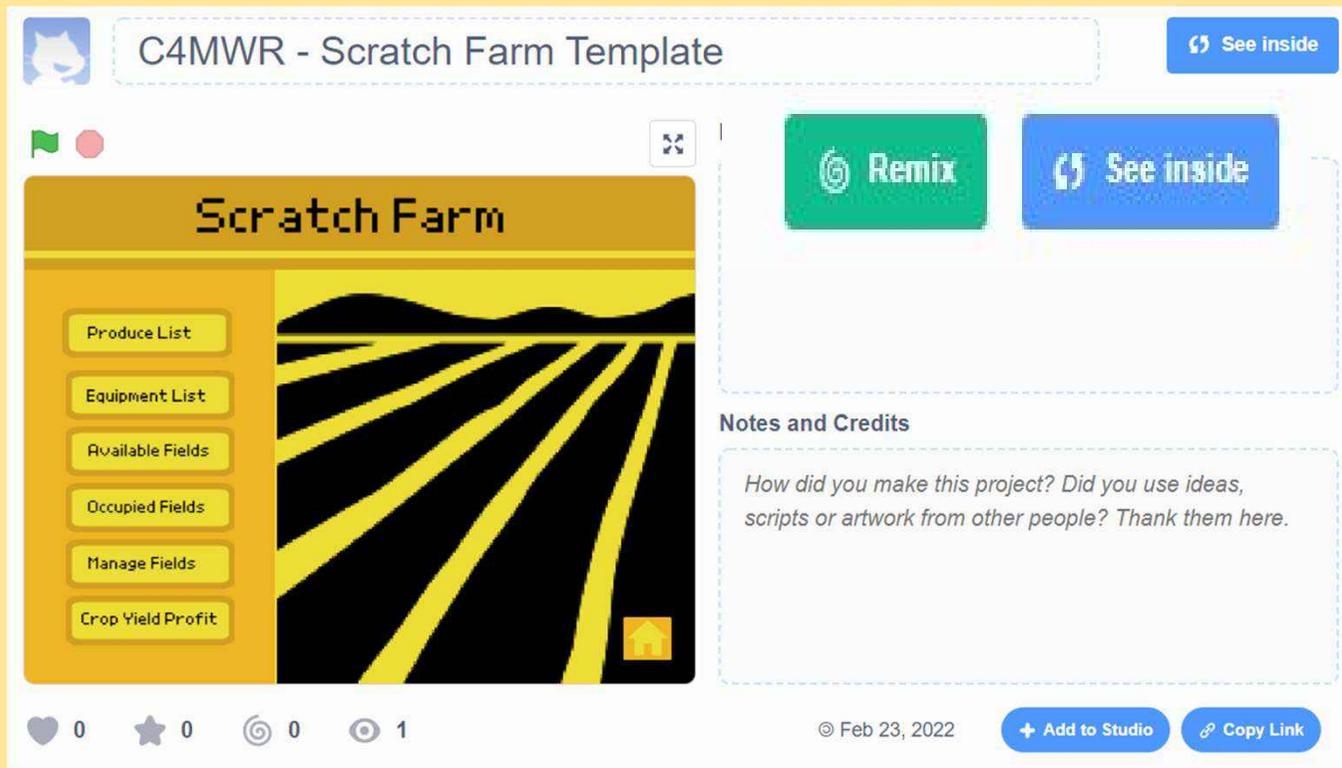
Activity scenario summary:

In this example we will code a project which replicates the running of a **farming or agricultural business software**.

This project will help you develop an understanding how coding is used in the agricultural industry and the importance of technology in the farming sector. This project should:

- Show produce list
- Show the equipment list
- Show fields available for planting
- Show fields occupied
- Be able to harvest fields and make them available for replanting
- Calculate profit from crop yield

First we are going to program the buttons that show all of the produce and equipment that the farm has.



Once you have logged into Scratch...

Click [here](#) to access the template to our project!

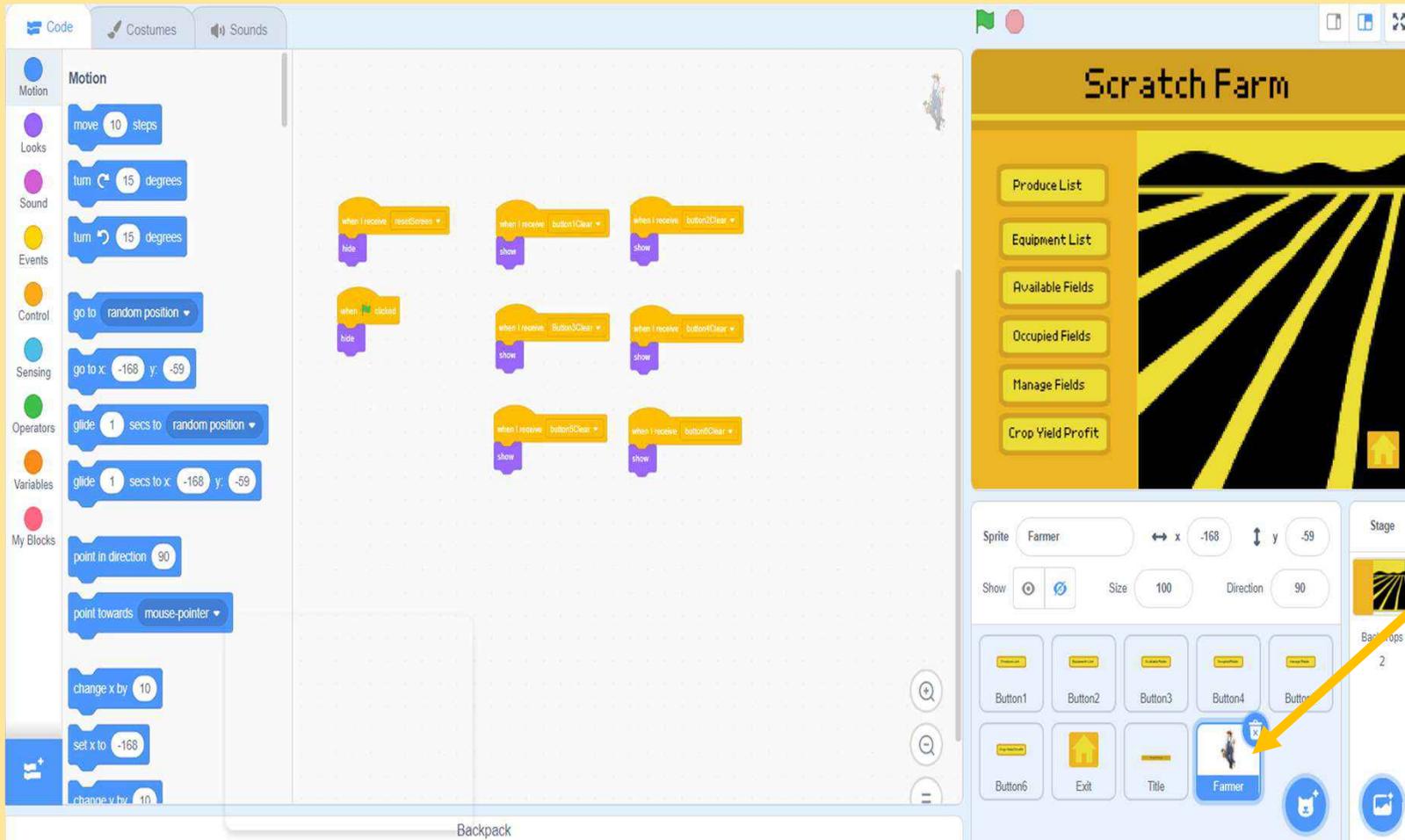
Click REMIX to get started with your project

By the end of this lesson, your project should look like [this!](#)
(Use this if you get stuck)

The Menu:

This is the menu! In the beginner section we will be adding functionality to the first two buttons.

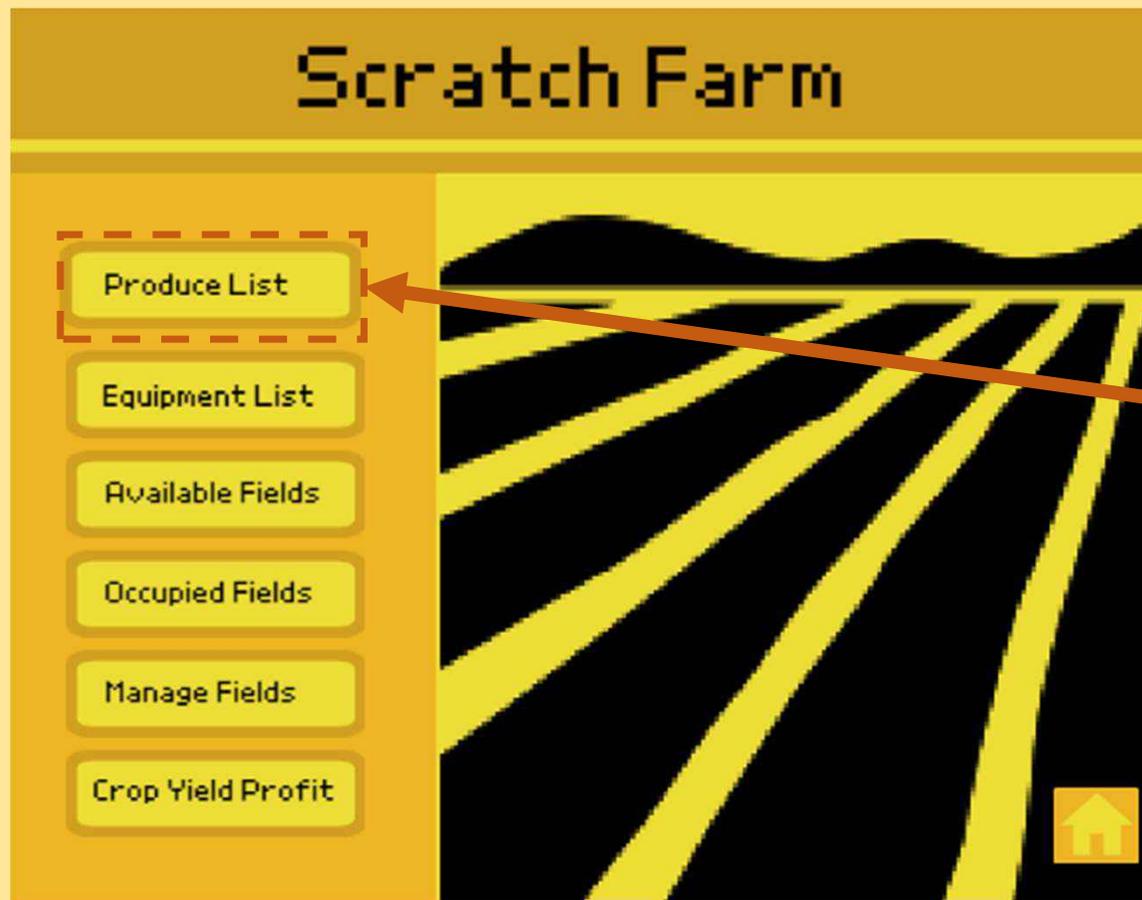




This window should look something like this!

Make sure that you have selected the farmer sprite.

Produce List



This button will allow the user to view all of the produce on the farm along with the value and the seed cost.

What will happen...

Produce List

Here is a list of Produce and their maintenance costs:



Produce	Produce Seed Cost (per hectare)	Produce Value (per ton)
1 Wheat	1 50	1 215
2 Barley	2 60	2 300
3 Corn	3 45	3 120
4 Maize	4 80	4 400
5 Rice	5 20	5 200

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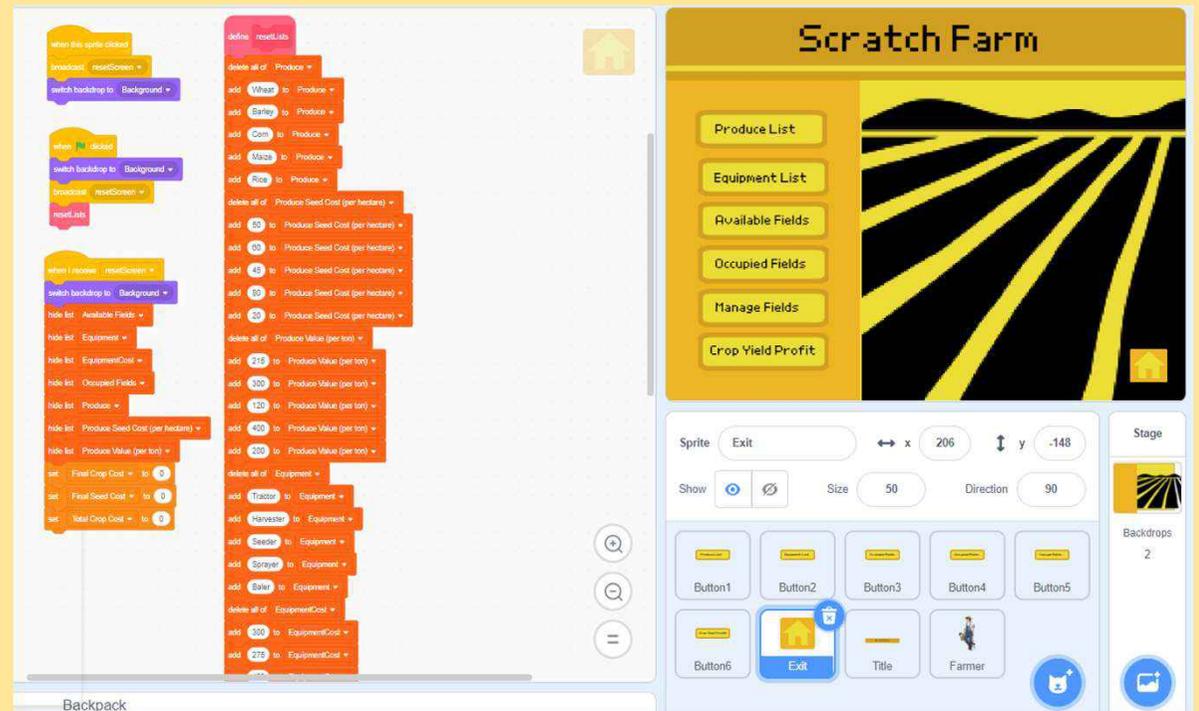


Step 1

When the 'Produce List' is clicked

Before we continue the code in the farmer sprite we need to be aware of the code inside the exit sprite.

Inside the exit sprite we have created the list for all of the produce, product value, seed costs, available and occupied fields, equipment and cost for them. This means that when we carry on coding inside the farmer sprite we don't need as many blocks.



Step 2

When the button is clicked this code will run and the screen is cleared.

The message comes up saying 'Here's a list of produce and their maintenance costs'. Then all of the lists show up for the user to see.

```
when I receive button1Clear
show
say 'Here is a list of Produce and their maintenance costs:'
show list Produce
show list Produce Seed Cost (per hectare)
show list Produce Value (per ton)
```

Equipment List



This button will allow the user to view all of the equipment on the farm along with the cost.

What will happen...

Equipment List

Here is all of the equipment and the cost for them:



Equipment	EquipmentCost
1 Tractor	1 300
2 Harvester	2 275
3 Seeder	3 180
4 Sprayer	4 230
5 Baler	5 170

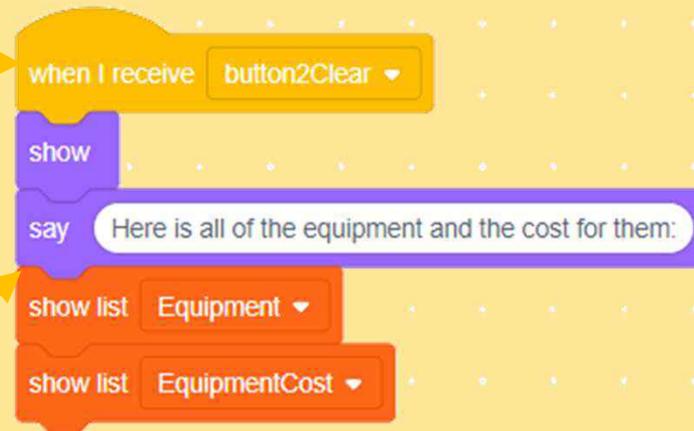
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Step 1

When the 'Equipment List' button is clicked

When the button is clicked this code will run and the screen is cleared.



The message comes up saying 'Here's all of the equipment and the cost for them'. Then all of the lists show up for the user to see.

Congratulations!

You have completed the beginner section of the farming and agriculture booking software.

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