This is a guide to sample programs from unit 3: scratch programming.

Sample programs are meant to illustrate the essential programming concept introduced in lessons. The programs are intentionally left incomplete to encourage students to finish their projects in their own unique way.

**Lesson 1:** Student Create an animation of the letters for their chosen name. Letters have behaviors and explain different aspects of the student’s identity.

**Scratch file name**: Lesson1\_name\_sample.sb3

**Lesson 2:** Student use the wait blocks to build a dialogue between 2 characters, explaining their choices for Name Project animation.

**Scratch file name**: Lesson2\_dialogue\_sample.sb3

**Lesson 3:** Student examine and compare the different blocks used to move the 3 sprites

**Scratch file name**: Lesson3\_moving.sb3

**Lesson 3:** Different movement blocs can be used to navigate a character between different landmarks on a map students choose to represent their community and the places they visit.

**Scratch file name:** Lesson3\_map\_route\_sample.sb3

**Lesson 4:** Event driven programming is used to advance the story of Abby & Avery planning for their celebration. Pressing the letter C: changes the scene to the kitchen to bake the cookies. Pressing the letter H: will change the scene to the living room to hang the decorations.

**Scratch file name:** Lesson4\_party\_animation\_sample.sb3

**Lesson 5:** Create your own celebration animation, used broadcast events to advance the story. The animation starts with Abby & Avery trying to decide whether to bake cookies or hang decorations. Depending on the letter pressed: C: baking cookies & H: hanging decorations. When C is chosen, both characters change costumes and scene to move to the kitchen to start backing the cookies.

**Scratch file name:** Lesson5\_party\_animation\_broadcast\_sample.sb3

**Lesson 6:** A variable outfit\_score is changed based on items of clothing chosen by the user. Each item has a positive or negative value assigned by the programmer depending on how they like the item or not.

**Scratch file name:** Lesson6\_variable\_clothing\_sample.sb3

**Lesson 7:** Conditional statements are used to display a different set of jobs a user can do depending on their age. More job choices are available, the older the person is.

**Scratch file name:** Lesson7\_age\_jobs\_sample.sb3

**Lesson 7:** Conditional statements are used to display a different set of jobs a user can choose to do depending on their age. Each job is assigned a point value

**Scratch file name:** Lesson7\_age\_jobs\_point\_sample.sb3

**Lesson 9:** AND & OR logical operators are used to add complexity to decision-making. User’s age determines a choice of jobs; each associated with a point values. A user may choose to do multiple jobs accumulating points which are displayed at the end. If points earned >= 15, privileges are earned.

**Scratch file name:** Lesson9\_age\_jobs\_points\_sample (1).sb3

Inputs:

* Age: determines list of jobs along with point values for each
* Job number (1 – 5): determines job chosen
* N: used to terminate the process for selecting jobs

**Lesson 10:** Abstract dance movements: jump, shimmy & bounce by creating blocks for each. Dance is composed of calls to the blocks

**Scratch file name:** Lesson10\_dance\_blocks\_sample.sb3

There blocks are created to define different dance moves:

* Jump
* Shimmy
* Bounce

**Lesson 11:** Create & implement a block with parameters.

**Scratch file name:** Lesson11\_blocks\_with\_input\_samples.sb3

There blocks are created with parameters to customize:

* Greeting (name is a text input)
* Height of the sprite’s jump (Y-axis steps is a number input)
* Width of a sprite’s shimmy (X-axis steps is a number input)