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| Name: | **Unit 4 Remix Project Planning Guide** |
| **Remix Step 1: Review your code from Mission 10 and Mission 11.** | |
| Mission 10: Fido Fetch  What does this program do?  What programming concepts did you learn and use in each mission? |  |
| Mission 11: Airfield Ops  What does this program do?  What programming concepts did you learn and use in each mission? |  |
| **Remix Step 2: Remix Project Concept** | |
| Look over the remix suggestions. Discuss with a partner. Then decide what you want to do for your remix project. Describe your remix project: |  |
| **Remix Step 3: Plan your code. What variables will you use in the project?**  Fill out the charts below. Use another piece of paper to design your program with an algorithm. | |
| What global variables and constants will you use in the project? Fill in the chart. You do not need to fill in every line, or you can add more. | |  |  | | --- | --- | | Variable Name | What it will be used for: | |  |  | |  |  | |  |  | |  |  | |
| What list or dictionary will you use? Describe it in the space provided: |  |
| What will you use for input (input() or buttons pressed). Describe the input and expected outcome. |  |
| What functions will you write? Describe each one.  Add more rows as needed. | |  |  | | --- | --- | | Function name | What it will do | |  |  | |  |  | |  |  | |  |  | |  |  | |
| Extras:  What else will you need for your program?  (sound, LEDs, etc.) Describe extra code you will use in the space provided: |  |
| **Remix Step 4: Write your code** | |
| Start a new file. Use the sandbox  when you write the code. Write just a few lines at a time and test often. You can choose which 3D environment you want for the remix project. | |
| **Remix Step 5: Commenting and feedback** | |
| Documentation | * Make sure your code is readable by adding blank lines * Add comments to explain sections of code |
| **Peer feedback:** Get feedback from two (or more) people. You can be one of the peer reviewers. | |
| Peer Review #1 Name: |  |
| Go through the checklist. Are all requirements met? If not, list any missing criteria. |  |
| What do you like about the program – be specific! |  |
| Give at least one suggestion. Begin with “what if” or “maybe you could” |  |
| Peer Review #2 Name: |  |
| Go through the checklist. Are all requirements met? If not, list any missing criteria |  |
| What do you like about the program – be specific! |  |
| Give at least one suggestion. Begin with “what if” or “maybe you could” |  |
| Review the comments. Then take time to improve or add to your project. | |
| **Post-Mission Reflection** | |
| What did you change in your project after reading the feedback? |  |
| What abstractions did you use in this program? How does the abstraction manage complexity in your code? |  |

**Unit 4 Remix Project Rubric Checklist:**

* Filename is descriptive
* Uses global and local variables appropriately
* Uses at least one concept from Mission 10:
  + Define and use a dictionary
  + Iterate over a dictionary
  + Add a key:value pair to a dictionary
* Uses at least one concept from Mission 11:
  + Increment a counter
  + Math operations: //, %, \*\*
  + Control LEDs with a Boolean list
* Defines and calls at least one function
* Gets input from the user (button press, input() function)
* Includes something extra (sound, more than one sensor, more than one function, more LEDs, etc.)
* Code follows programming conventions of comments, readability, indenting, and capitalization
* Code runs with no errors