

Purpose: This program will utilize the MIPS assembly language. It will require the use of arithmetic and control instructions.

Program Specifications

A template file will be provided to build off of. The template includes two arrays of values for some widget sizes. The program will need to see if the widgets are built within the tolerances specified.

For each widget, find the difference between the size measured and the target size. Each widget that is less than 92% of the target size will be rejected. Any widgets that are larger than 108% of the target size will need to be reworked. Otherwise, it is acceptable. For each widget, determine if it is to be rejected, reworked, or accepted and store the value in the widget status array. -1 for rejected, 0 for accepted, 1 for rework.

In a separate loop, output the status of each widget using the print integer and print string system service calls using the stored values in the status array. See the example on the next page.

Submission

Once you are satisfied with the program, upload the assembly source code (.asm) file to the class website.

Example Execution

Widget #1: Accepted
Widget #2: Accepted
Widget #3: Rejected
Widget #4: Rework
Widget #5: Rejected
Widget #6: Rejected
Widget #7: Accepted
Widget #8: Rejected
Widget #9: Rejected
Widget #10: Rejected
Widget #11: Rework
Widget #12: Accepted
Widget #13: Rework
Widget #14: Accepted
Widget #15: Accepted
Widget #16: Accepted
Widget #17: Rejected
Widget #18: Accepted
Widget #19: Accepted
Widget #20: Rejected
Widget #21: Accepted
Widget #22: Accepted
Widget #23: Accepted
Widget #24: Accepted
Widget #25: Rejected
Widget #26: Accepted
Widget #27: Accepted
Widget #28: Accepted
Widget #29: Rejected
Widget #30: Accepted
Widget #31: Rejected
Widget #32: Rework
Widget #33: Rejected
Widget #34: Accepted
Widget #35: Accepted
Widget #36: Rejected
Widget #37: Rework
Widget #38: Accepted
Widget #39: Rejected
Widget #40: Accepted
Widget #41: Rework
Widget #42: Rework
Widget #43: Rejected
Widget #44: Rework
Widget #45: Accepted
Widget #46: Rework
Widget #47: Accepted
Widget #48: Accepted
Widget #49: Accepted
Widget #50: Rejected
