

Create a ticket machine for a transportation system.

(adapted from Barnes and Kölling)

A ticket machine can be created by specifying how much a ticket costs. It can tell you the cost of a ticket on demand.

Comment: The unit of money is the "cent". Partial units are not allowed. All tickets from a given machine cost the same.

Comment: A ticket machine does not require a GUI at this time. It will be manipulated functionally.

A user (i.e. other code) can insert money into a ticket machine and the machine will tally how much as been inserted.

A ticket machine should be able to tell you how much has been collected for the current ticket.

A ticket machine must be able to print tickets.

Comment: Tickets are written to standard output as are other messages, including error messages.

A ticket machine should be able to tell you how much money has been collected altogether.

Here are some more stories that should get you to a better version.

A ticket machine should be able to refund any balance before or after printing a ticket.

A ticket machine should not issue a ticket unless sufficient money has been inserted. It should instead complain.

A ticket machine should complain if you try to give it negative amounts of money.

A ticket machine should keep a running total of monies collected for tickets.

Future stories

Management requires a total money report that contains the number of tickets sold and the total monies collected.

Permit management to reset the total money to 0, presumably after emptying the money box.

Management should be able to increase the fares by incrementing the cost of a ticket.

Negative increments are not allowed.

First class fares have been implemented at twice the usual fare. Permit printing first class tickets.

Provide a GUI for the ticket machine with buttons for all functions except the total and get balance. It should use textfields for input and a text area in which to display the ticket and informational messages. It should show you the balance whenever you correctly insert money.

Error messages should also be shown in the text area.

Create a second GUI for admin functions such as getting the total money, resetting it to 0, etc.