

# Object Oriented Programming (OOP)

When designing programs, the nouns in our program description become our classes & the verbs become our functions/method

## EX Vending Machine

Features: buy a snack  
 ↳ output the snack  
 Specify snack you want  
 keep track of snack cost  
 → ensure user has enough money  
 → give change

keep track of quantity of snacks  
 → prevent user from buying out of stock snacks

show the snacks available

Snack  
 data { name (str)  
 cost (float)  
 calories (int)  
 quantity (int)

Vending Machine  
 data [ list of Snack  
 buy Snack  
 show Snacks (list all snack to user)

data	calories (int) quantity (int)
methods	setters/ getters/ --str--

Show Snacks (list all snack to user)  
 add Snack  
 delete Snack  
 load Snacks (from file)

Player :

money  
 list of snacks } data

Spend Money  
 Add Snack  
 list Snacks

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Goal of OOP : The design of the program  
 should match the problem definition