

consumer((consumer\_ID), location, package\_ID, conBankAccount\_ID, plant\_ID)

orders(consumer\_ID, package\_ID, packageNum)

package((package\_ID), timeRequired, Budget)

package\_chips(package\_ID, chip\_ID, chipNum)

chip((chip\_ID), chipType\_ID, machine\_ID)

chip\_processed\_plant(chip\_ID, plant\_ID)

plant((plant\_ID), location, plantOwner\_ID)

machine((machine\_ID), machineType\_ID)

chip\_pre\_operation((chipType\_ID),(operation\_ID), precedence)

operation((operation\_ID), operationType\_ID)

plant\_holds\_machine(plant\_ID, machine\_ID, machineNum)

machine\_ability\_operation(machine\_ID, operation\_ID, feasibility, time, machineExpense)

machine\_process\_operation(machine\_ID, operation\_ID)

planRecord((operation\_ID), (machine\_ID), planStartTime, planEndTime, processExpense)

actualRecord((operation\_ID), (machine\_ID), actStartTime, actEndTime, processExpense)

plantOwner((plantOwner\_ID), plantBankAccount\_ID, plan\_ID)

\*INFO BELOW MIGHT BE NOT BE THE MOST UPDATED VERSION

consumer((consumer\_ID), location, package\_ID, plant\_ID, conBankAccount\_ID)

package((package\_ID), (chipType\_ID), chipNum, timeRequired, Budget, location)

plant((plant\_ID), (machine\_ID), machineNum, location, plantOwner\_ID)

machine((machine\_ID), operationType\_ID, machineType\_ID, time, machineExpense)

machineType((machineType\_ID), plant\_ID)  
chipType((chipType\_ID), (operation\_ID), precedence)  
chip((chip\_ID), chipType\_ID, (machineType\_ID), plant\_ID)  
operationType((operationType\_ID), plant\_ID)  
operation((operation\_ID), operationType\_ID, plant\_ID, machine\_ID)  
planRecord((operation\_ID), (machine\_ID), planStartTime, planEndTime, machineExpense)  
actualRecord((operation\_ID), (machine\_ID), actStartTime, actEndTime, machineExpense)  
plantOwner((plantOwner\_ID), plantBankAccount\_ID, plant\_ID)

### Relationships between entities

orders(package\_ID)

//What kind and amount of chips consumer decides to use, could be multiple packedChips  
packagedChips(chip\_ID)

plantOwnership(plant\_ID)

machineLocation(machine\_ID)

machinePlanRecord(operation\_ID, machine\_ID)

machineActualRecord(operation\_ID, machine\_ID)

machineOperation(operation\_ID)

machineOperationDetails(machine\_ID, machineType\_ID, operationType\_ID)

chipRequiredOperation(chip\_ID, chipType\_ID)

chipRequiredMachine(chip\_ID, machine\_ID)

//Where you decide to process the chip, could be in multiple places  
chipLocationPlant(chip\_ID, plant\_ID)

operatingSteps(chip\_ID, chipType\_ID)

singleOperationStep(operation\_ID, chipType\_ID)

operationPlan(operation\_ID, machine\_ID)

operationActual(operation\_ID, machine\_ID)

operationDetails(operation\_ID, operationType\_ID, machineType\_ID)