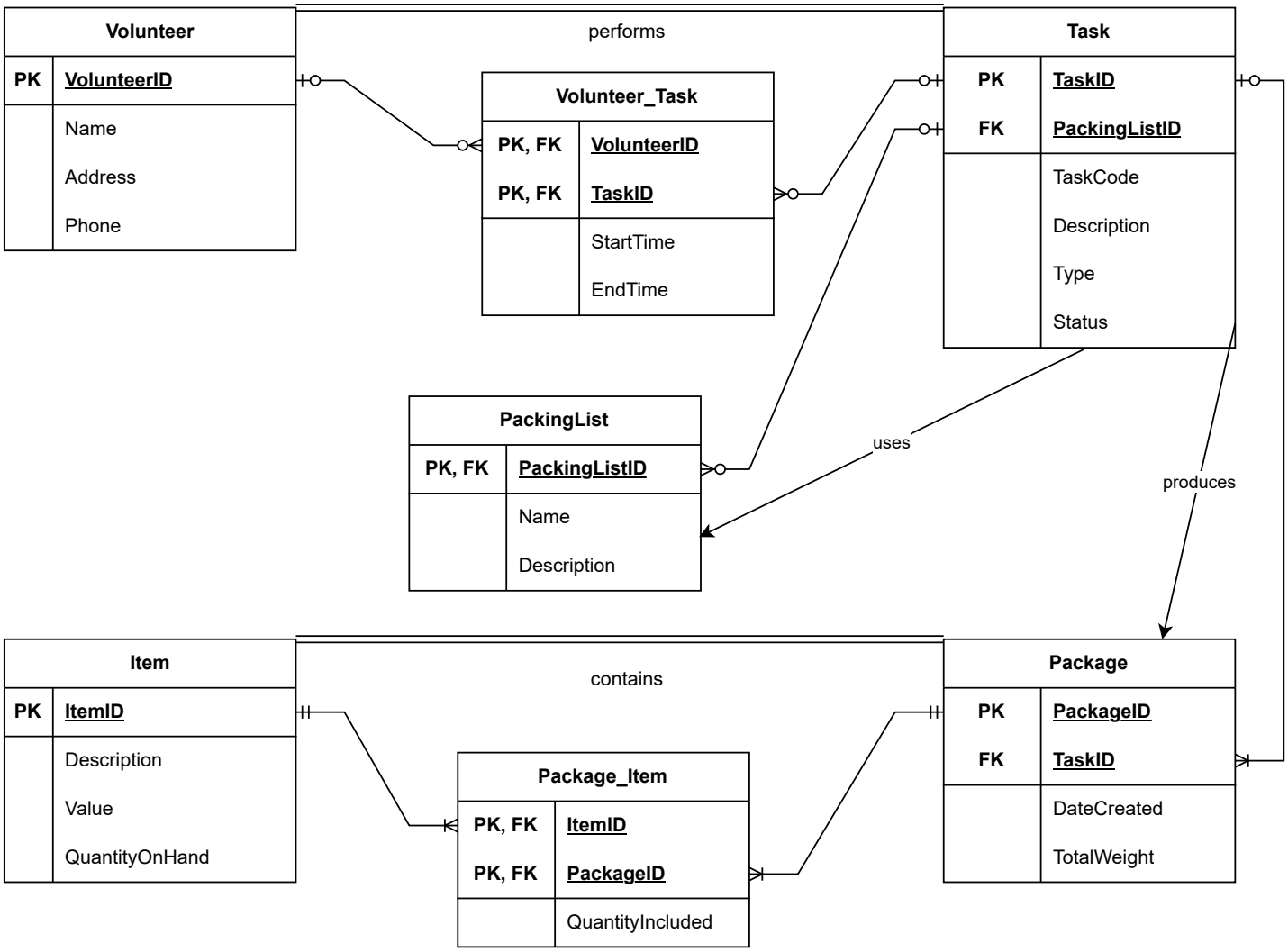
Keshav Goyal



Volunteer Database Design:

Relational Schema
Volunteer Table:
Volunteer(VolunteerID, Name, Address, Phone)

Task Table:
Task(TaskID, PackingListID, TaskCode, Description, Type, Status)

Volunteer_Task:
Volunteer_Task(VolunteerID, TaskID, StartTime, EndTime)

PackingList Table:
PackingList(PackingListID, Name, Description)

Package Table:
Package(PackageID, TaskID, DateCreated, TotalWeight)

Item Table:
Item(ItemID, Description, Value, QuantityOnHand)

Package_Item:
Package_Item(PackageID, ItemID, QuantityIncluded)

Primary Keys:
Volunteer(VolunteerID)
Task(TaskID)
Volunteer_Task(VolunteerID, TaskID)
PackingList(PackingListID)
Package(PackageID)
Item(ItemID)
Package_Item(PackageID, ItemID)

Foreign Keys:
Volunteer_Task(VolunteerID) → Volunteer(VolunteerID)
Volunteer_Task(TaskID) → Task(TaskID)
Task(PackingListID) → PackingList(PackingListID)
Package(TaskID) → Task(TaskID)
Package_Item(PackageID) → Package(PackageID)
Package_Item(ItemID) → Item(ItemID)

Notes:

- The many to many relationships between (Volunteer/Tasks) and (Packages/Items) has been resolved using the associative entities Volunteer_Task and Package_Item.
- PackingTask makes sure that only packing tasks are connected to packing lists
- All packages are associated with a single task, but a task can have multiple packages
- Items can exist without being used in a package