Homework #5 - Junkyard System Design

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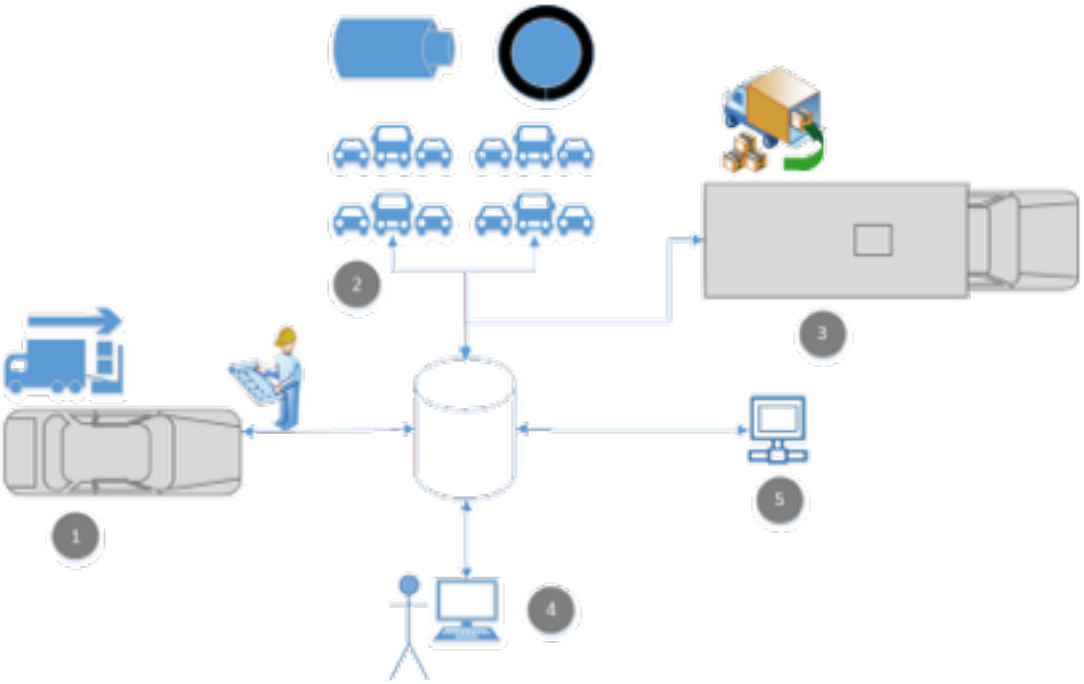
Key Features



1. Technician evaluates incoming vehicles and updates central repository.
2. High-need, high transferability parts (exhuasts, wheels, tires etc.) removed and stored in bins. Scrap car locations recorded.
3. Cars whose value as scrap is higher than composite parts are crushed and sold as scrap metal.
4. User's can enter their model info (VIN, make, model, year etc) and desired part. System returns part location (if present)
5. Part requests and query's over the internet can be sent to other scrap yards. Incoming requests query local database and if part found, location is forwarded to shipping transport.

Objects

Car			
carid	vin	adddate	enddate
make	model	options	year
color	pSalv	pSold	location
purchprice			

Part				
partid	carid	year	parttype	location
adddate	selldate	make	model	condition
manfac	shareid	desc	value	sellprice
length	width	height	weight	

Client		
clientid	type	name
street	added	contact
state	zip	
mphone	hphone	bphone

Workflow

1. Junk car arrives
2. Tech examines car entering vin, if legible or make, model & options. (make model & options can be populated from vin)
   2.1. Tech identifies number of salvageable parts *pSalv* and generates part record for each part, including the frame.
   2.2. *Shareid* signifies interchangeable parts. e.g Ford Explorer & Ford Flex use same engine so *parttype* engine for both cars have the same *shareid*.
3. User or other scrap yard, requests part for make model and year. System searches for exact match as well as similar *parttype* and *shareid*.
   3.1. Part *value* calculated from car *purchprice / pSalv ** 1.*condition* or Part *sellprice* if coming from other scrapyard each time part is queried. That way, as more parts from a given car have been sold, min sale price can be adjusted to increase sales volume while considering condition of specific part.
   3.2. As parts are sold, matching *carid* has pSold updated. When *pSalv = pSold, enddate* is added. This way inventory processing and turnaround times can be easily tracked without joins.

Events

Sale	Sale_detail	Compatible	
saleid	sale_detailid	parttype	shareid
clientid	saleid	make	model
tstamp	partid	beginyear	endyear