Problems: System Structural Design (100 points)

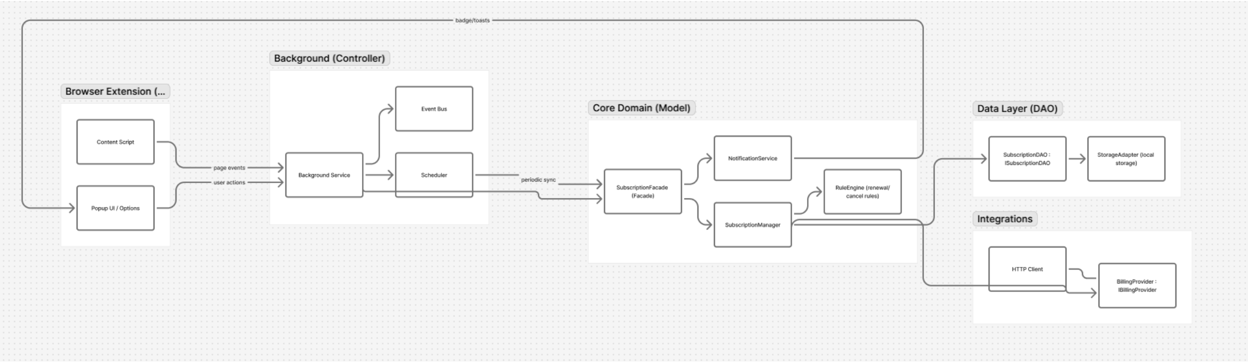
Team 8 // Minh Bui , Braylon Spann , Bryan Lam , Kevin D

Design a detailed system model (level-3 design) for your course project. Focus on the following aspects:

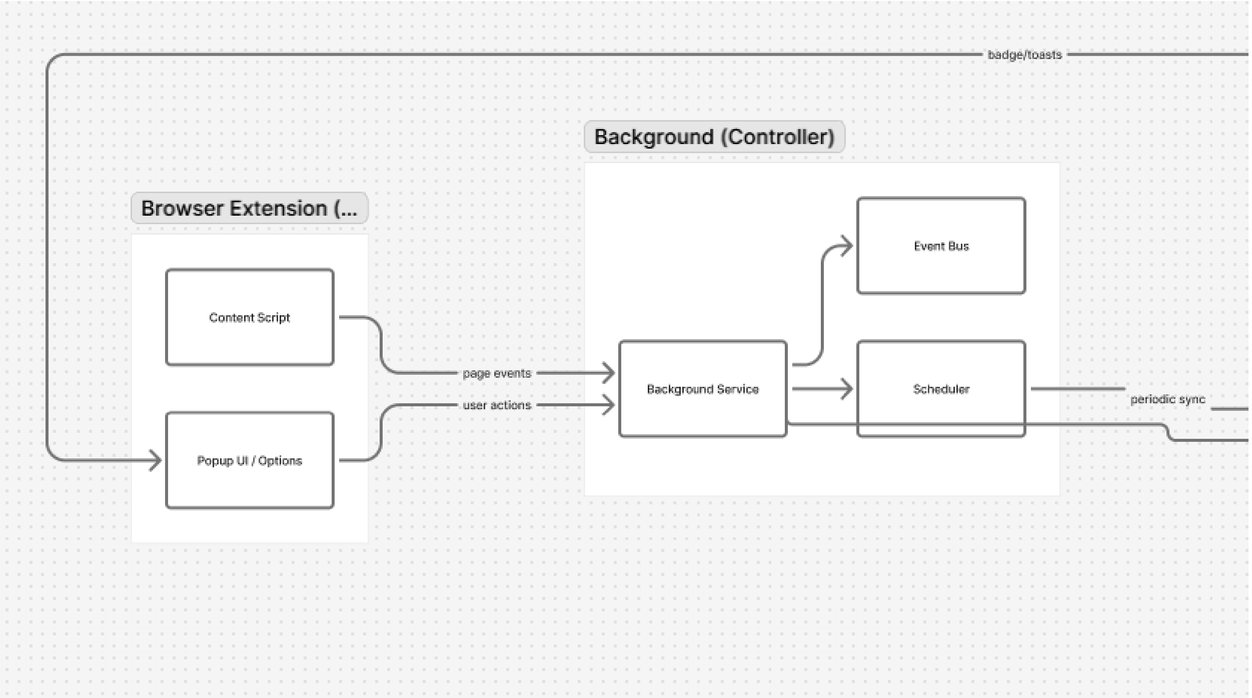
- Group related concepts/classes together and place them into one package/subsystem
- Identify the **principal system objects** (active object)
  - Examples: DBAdapter (DAO), GameEngine, xManager, Communicator, Coordinator, msgSender, msgReceiver
  - You might have identified some **system objects** while you worked on UML sequence diagrams. Here our goal is to identify as many as possible, so that you can better plan for task split in implementation.
- Specify object/component interfaces
  - For each class, add public operations
  - Use abstract super classes or interfaces as far as you can.
  - Remember the façade pattern we have introduced? Use it if applicable
- Your design should apply at least 3 out of the following 4 techniques [60 points total, earn 20 points for each]:
  1. Inheritance
  2. Interface
  3. MVC pattern
  4. DAO pattern
  5. Façade Pattern
- Note that if your class diagram becomes too big or too complicated, you can always split it into multiple ones. Maybe one for each package, then use a high-level diagram (only showing packages) to relate the packages.

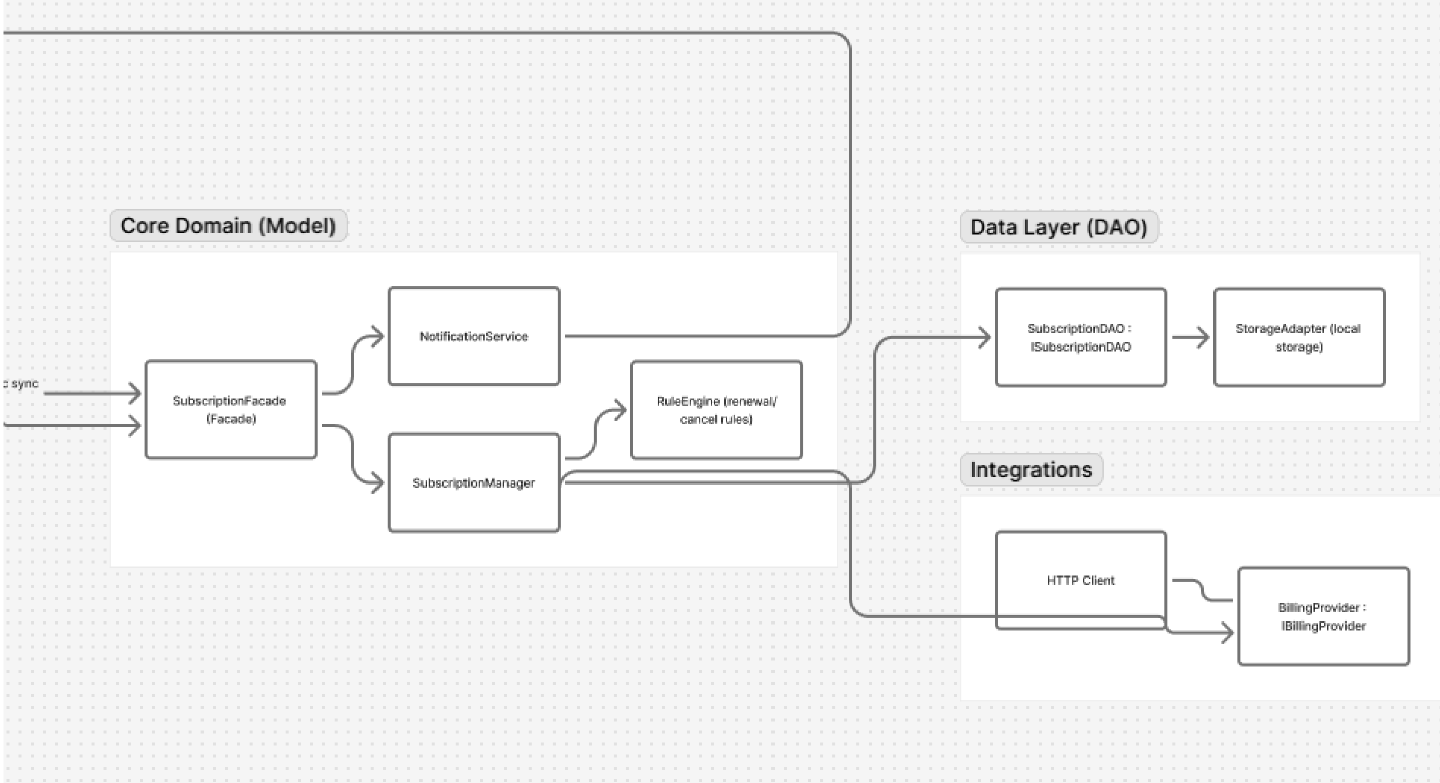
Paste your diagrams here, make sure they are readable, and submit to Cougar Courses.

Package/Subsystem diagram (Level-3):

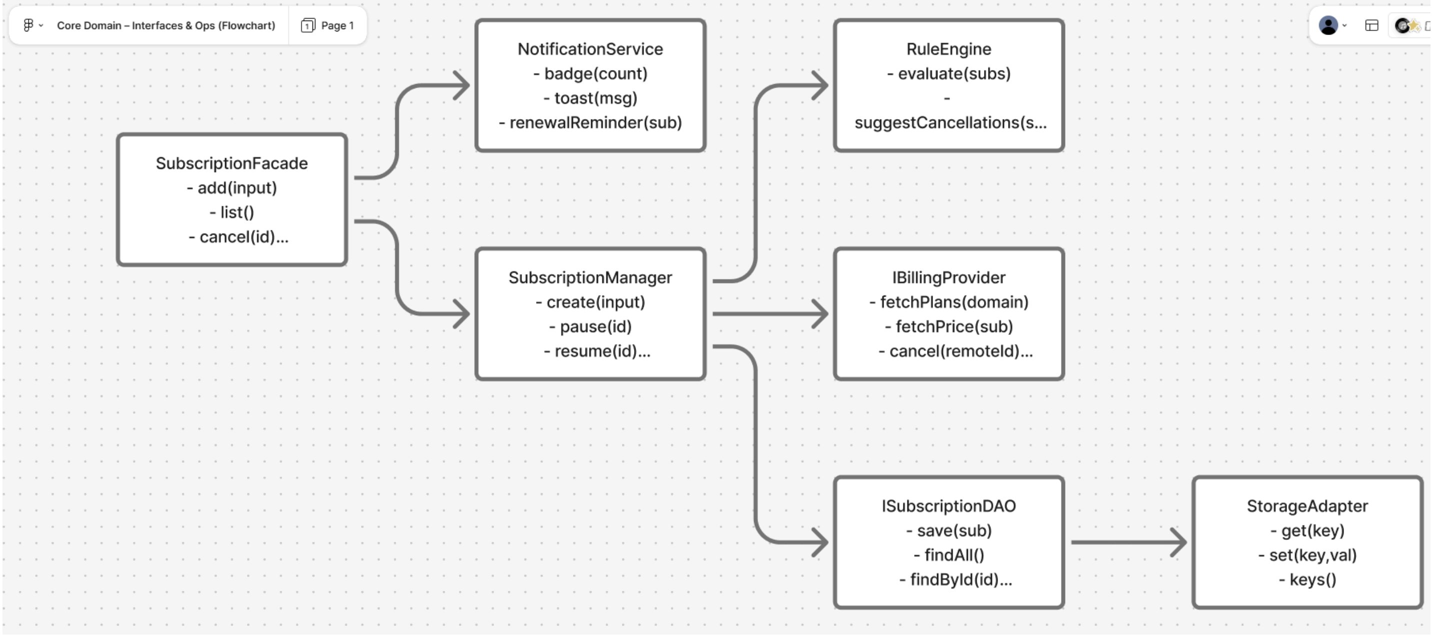


Zoom in




Core Domain (Model)
Data Layer (DAO)
c sync
SubscriptionFacade (Facade)
NotificationService
SubscriptionManager
RuleEngine (renewal/ cancel rules)
SubscriptionDAO : ISubscriptionDAO
StorageAdapter (local storage)
Integrations
HTTP Client
BillingProvider : IBillingProvider

Core Domain “Interfaces & Ops”:


Core Domain – Interfaces & Ops (Flowchart)
Page 1
SubscriptionFacade
- add(input)
- list()
- cancel(id)...
NotificationService
- badge(count)
- toast(msg)
- renewalReminder(sub)
SubscriptionManager
- create(input)
- pause(id)
- resume(id)...
RuleEngine
- evaluate(subs)
-
suggestCancellations(s...
IBillingProvider
- fetchPlans(domain)
- fetchPrice(sub)
- cancel(remoteId)...
ISubscriptionDAO
- save(sub)
- findAll()
- findById(id)...
StorageAdapter
- get(key)
- set(key,val)
- keys()