Technology Bucket : Software - Mobile App development
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Category: Software
Problem Code : SJ1
College Code : 1-3508365883

Problems Faced :-

1) Excessive push notifications are big turn off for the users, and that could have a major impact on the users interest in the app.
2) Untimely push notifications are distracting and have negative impact for the app and increase the churn rates of the app.
3) Unrelated and unfocused push notifications not based on any strategy harm the app growth in the longer run.

Our Approach :-

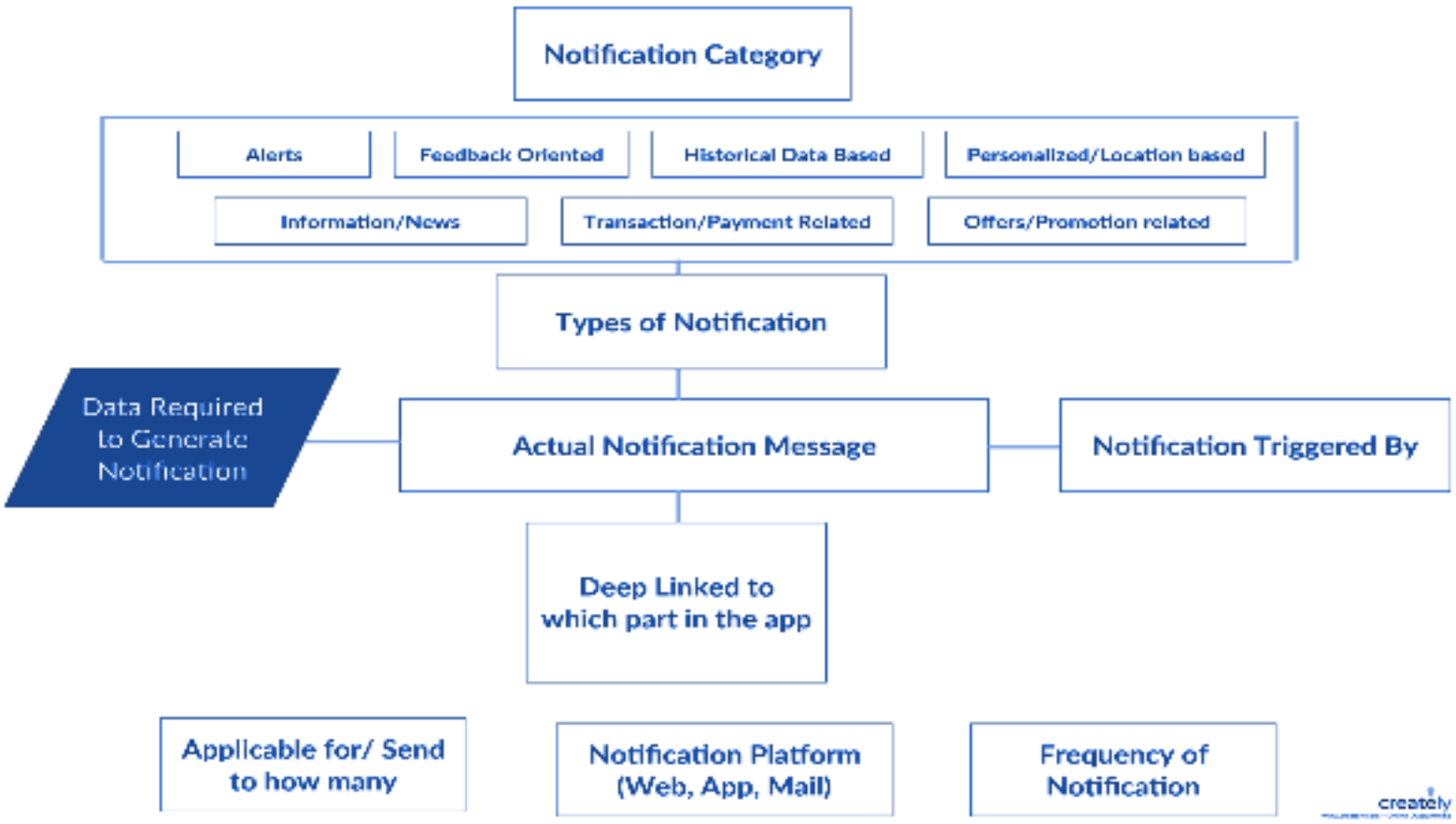
1) As the problem statement deals with sending the push notification at the proper moment, we need to have loads of data. There are various categories in push notifications and based on that we decide on the and we need to decide on the intent of the push notification. The frequency of the notification, the user base to whom we need to send that particular piece of notification is also very important.
2) We need to choose the timing of the sending of the push notification based on the users data and by analyzing his habits on the app. Personalized and location based notifications work the best in entic ing users interest.
3) We need to collect data of user in every screen of the app, i.e. the actions he does on it. Every element on the screen will have an importance rating. Now data is collected according to the time spent on these elements multiplied by the importance rating.

Data value = Importance_rating * Time_spent on the particular element.

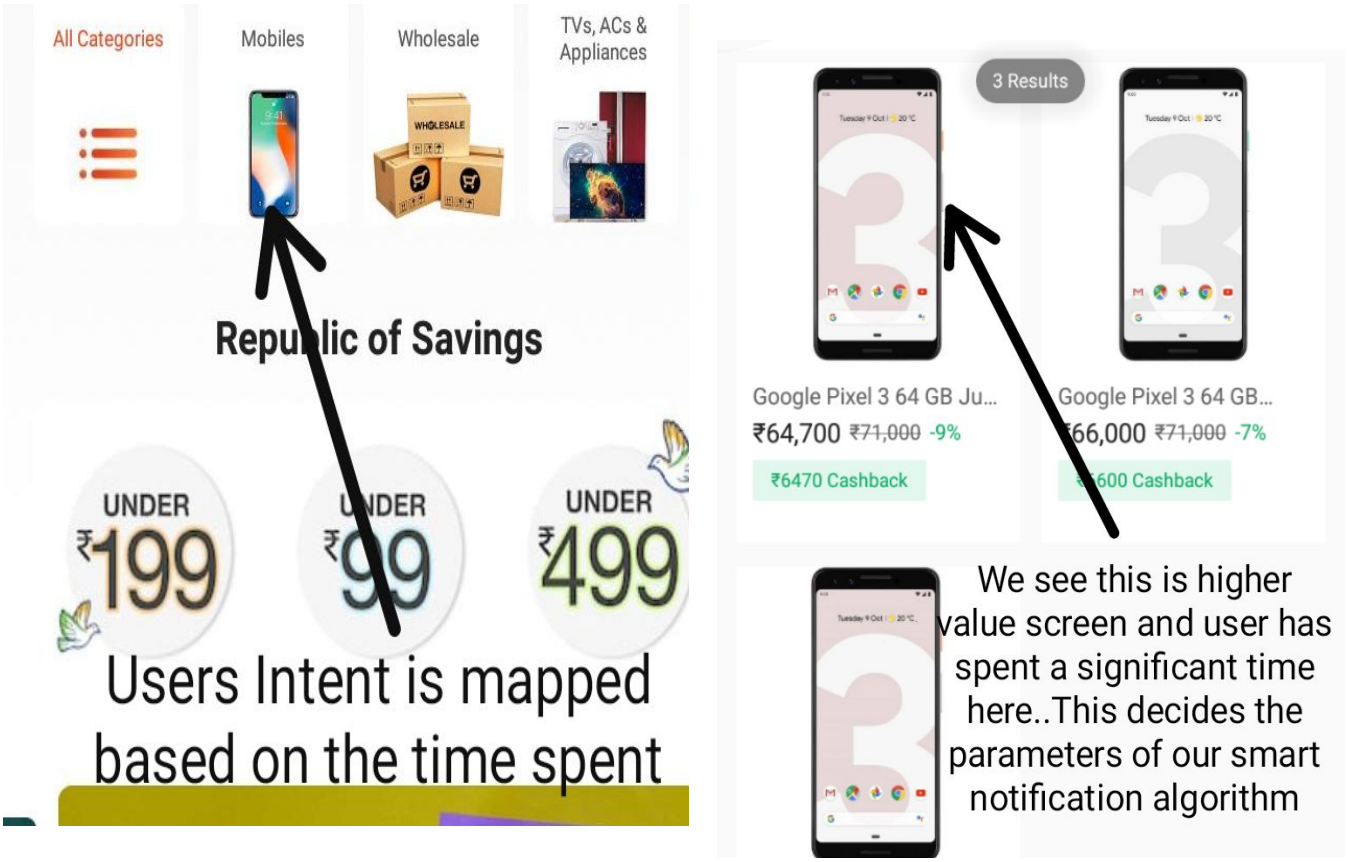
4) We need to categorize these app insights and data values and draw out the probability stating whether the user will stay on that particular screen and interact with the elements of the app and further use it to our benefit.
ex. **To gain probability values that he will buy the particular product.**

5) Thus based on this, and alongside analyzing user insights on various mediums i.e his social interactions and his association with different products and ads, we can carve out a profile for the user and store it in our system and build our notification strategy.

This is the **architecture** made by us showing how a push notification is evolved and what are the general building blocks in it. This architecture shows the notification flow cycle and how it is triggered and what data we need to trigger a push notification.



Prototype :-

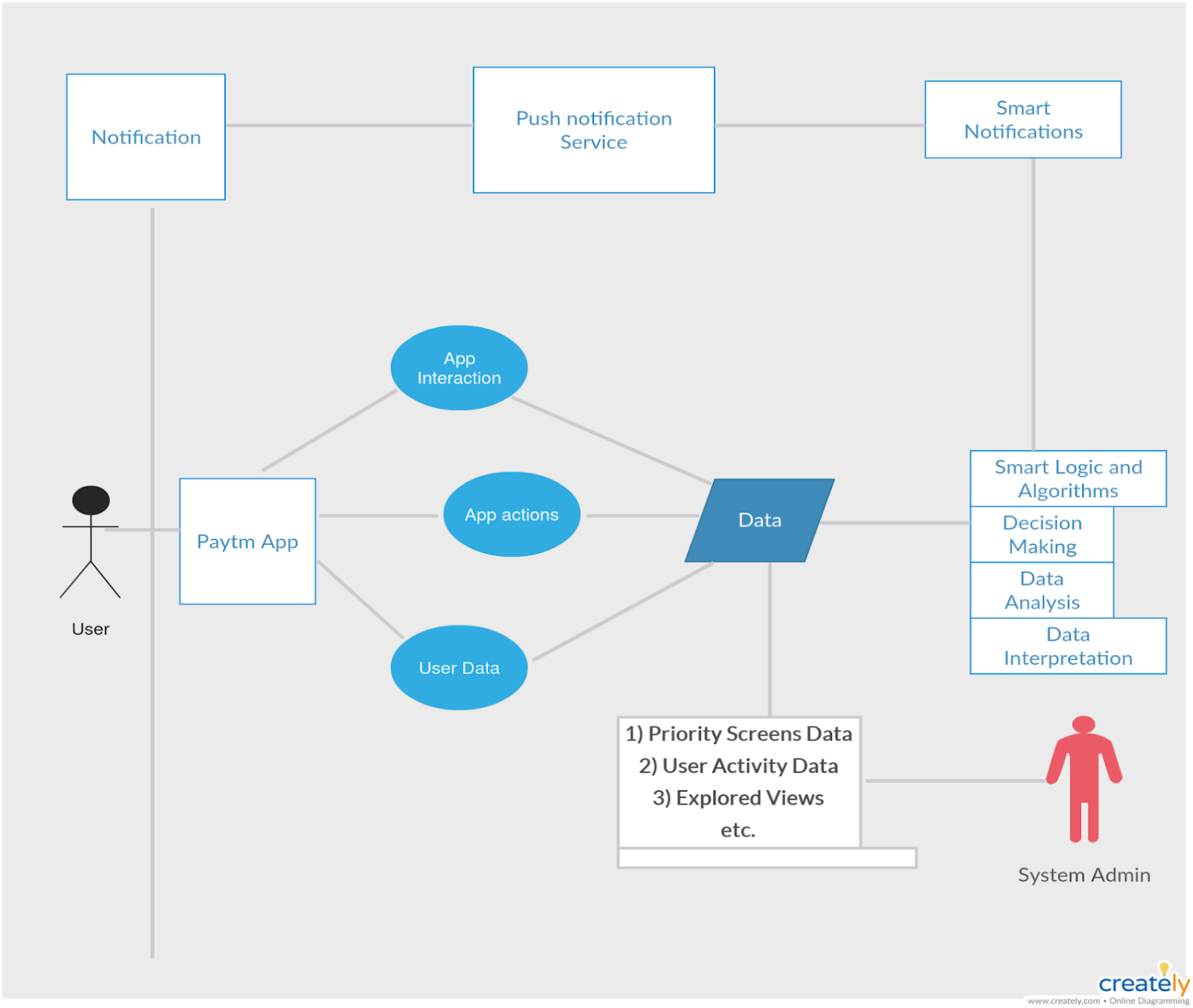


Some of the screens of the App are shown here and the data as described in our architecture is obtained from these elements.

Technology Stack

Web Framework : AWS SNS, Firebase Cloud Messaging	
Programming Language : PHP, MySQL, Python	
WebServer - Apache HTTP Server	
Operating System : Windows server 2012	**Android APK**
SERVER	**CLIENT**

Use Case Diagram :-



Dependencies

1. Permission from user to grant access to track traces of his data. Based on this data only that we can carry on the further approaches of our smart notification idea.

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