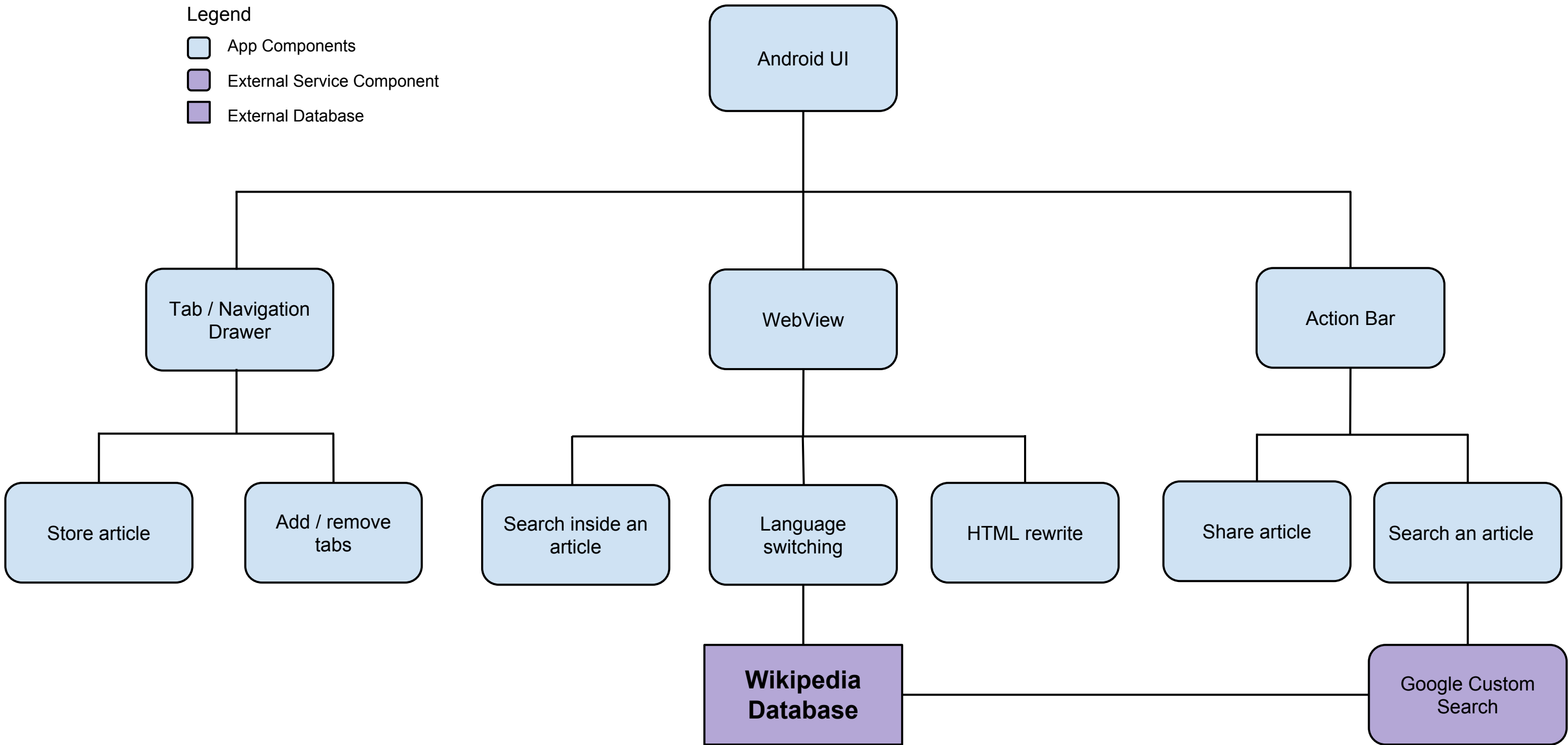# Incremental and Regression Testing

Incremental Testing (Bottom-Up)

We have selected bottom-up incremental testing due to the following reasons:

- It is more frequently used in industry and hence it is better to follow what is favored in industry
- It is more convenient to write the driver modules than the stubs
- We started from lower level modules and then proceeded towards upper level modules, hence bottom up approach was more desirable
- The bottom-up approach is easier to test as it prevents the overlapping of the design
- It is more flexible and adaptable

Component Name	Input	Output	Dependent Component
Store article	HTML of the specific article to be stored	A HTML file stored on memory	Tab / Navigation Drawer
Add / remove tabs	User click to add / remove tab	New tab added / removed to the tab list	Tab / Navigation Drawer
Search inside an article	Text to be searched on the article	Text Highlighted on the article	WebView
Language switching	Language list	URL of the specified language	Wikipedia Database, WebView
HTML rewrite	HTML string retrieved from Wikipedia server	HTML string with SearchBar and languages switching code removed	WebView
Share article	URL of the article to be shared	A list of application able to share the link, passing the link to them	Tab / Navigation Drawer
Search an article	Article name	Name, URL of the article searched	Action Bar, Google Custom Search
Google Custom Search	HTTP get request with the article name and other options.	List of wikipedia links with some articles searched	Search an Article
Wikipedia Database	Article title	List of other possibles languages for an article and article links when searched	Search an article, Choose a different article language

Module:			Store article	

Incremental Testing

Defect #	Description		Severity	How to Correct
1	Action to list the articles saved not working		2	Implement an activity to show the saved links and articles

Regression Testing

Defect #	Description		Severity	How to Correct
1	When implementing the button to save the article, they have to be saved in diffent formats depending the android version where the app is running		2	Verify the android version and then save in the appropriate format
2	Does not restore the tabs on reopening the app		2	Implement method to save the articles that are currently open.

Module:			Add / remove tabs	

Incremental Testing

Defect #	Description		Severity	How to Correct
1	Action title still changes even if the tab is loaded in background		2	Title shouldn't change if current tab isn't loading a new page
2	WebView still displays web content if the last tab is removed		1	Remove the last WebView from root view if it's removed

Regression Testing

Defect #	Description		Severity	How to Correct
1	Preventing title change when tab is loading in the background causes current tab title not changing too		2	Current tab title should change when current tab is loading

Module:			Search inside an article	

Incremental Testing

Defect #	Description		Severity	How to Correct
1	App crashes when nothing is entered in the search field		1	Put catch exceptions to handle this case

Regression Testing

Defect #	Description	Severity	How to Correct
1	Does not remove highlights after closing the search field	2	Implement method to remove all the highlights

Module:	Language Switching		

Incremental Testing

Defect #	Description	Severity	How to Correct
1	After switching to a non-English language, doing another search will bring up the new result in English.	2	Store current language code as a variable and pass to Search module
2	Language names are not all capitalized properly	3	Manually fix JSON string of languages
3	Certain languages are invisible on Android devices (i.e. not a full Unicode font set installed)	2	Known limitation with Android devices. Wikipedia's suggested solution is to root the device and install font kits, which we cannot legitimately require.

Regression Testing

Defect #	Description	Severity	How to Correct
1	When language dialog is open, selecting "OK" option without selecting a language will crash the app.	1	Include exception handling to close the dialog without switching languages or crashing.
2	When selecting a language, there is no easy way to tell what language the user has chosen.	3	Change dialog to use some sort of visual aid - radio button, check box, highlight, etc.

Module:	HTML rewrite		

Incremental Testing

Defect #	Description	Severity	How to Correct
1	HTML rewrite for removing built-in search bar not implemented	1	Implement function to remove HTMLs related with built-in search bar
2	HTML rewrite for removing built-in language switching not implemented	1	Implement function to remove HTMLs related with built-in language switching

Regression Testing

Defect #	Description	Severity	How to Correct
1	Built-in search bar and language switching functionality still shows in the WebView	1	Implement HTML rewrite

Module:	Share article		

Incremental Testing

Defect #	Description	Severity	How to Correct
1	Action to share the article not working	2	Implement action button to share the articles

Regression Testing

Defect #	Description	Severity	How to Correct
Module:	Search an article		

Incremental Testing

	Description	Severity	How to Correct
1	When user searches for "Wikipedia", the wikipedia home page shows up	3	It should show the article related with Wikipedia

Regression Testing

Defect #	Description	Severity	How to Correct