What To Do When Salesforce Apex Heap Size Increases?

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Welcome to Salesforce! You've just encountered your first governor limit 😉.

The 'Apex heap size too large' error occurs when too much data is being stored in memory during processing.Total heap size must be **<= 6 MB.**

Total heap size[4]	6 MB	12 MB

What you can do to Overcome it :

1.) Don't use class-level variables to store a large amount of data. Only those variables which are used on the Visualforce page should be **public** rest all variables should be **private**, if not used by any other class.

2.) Utilize **SOQL For Loops** to iterate and process data from large queries. Best way to write a query in for loop to avoid filling space of heap by creating a list like :

```
Map accountMap = new Map();
for(Account tempAcc : [Select Id, Name From Account Limit 10000]){
    accountMap.put(tempAcc.Id , tempAcc.Name);
}
```

3.) Nullify the variables to make them out of scope as soon as they are no longer needed.

```
//Fetching account records
List accLst = [Select Id, Name From Account Limit 10000];
Map accountMap = new Map();
for(Account tempAcc : accLst){
    accountMap.put(tempAcc.Id , tempAcc.Name);
}
//To reduce heap size accLst = null;
```

4.) Use of **Transient keyword** to declare instance variable that can not be saved, and shouldn't be transmitted as part of the view state for the Visualforce page. e.g: Transient Integer tempVar ; Some apex objects are automatically considered transient, i.e their value does not get saved as part of the page's view state. These objects are **SavePoints**, **PageReference**, **XMLStream**Classes, etc. **Static variables** also don't get transmitted through the view state.