Emtel Ltd is the first mobile telephony operation in the whole Southern Hemisphere. This major step in Mauritian telecommunications history took place under the aegis of the Currimjee Jeewanjee Group, one of the foremost groups in Mauritius, and today, Emtel holds a partnership with Airtel, India's leading provider of prepaid & postpaid, wireless internet, broadband, fixed line, digital TV & mobile services. From a mobile company, Emtel has evolved into a one-stop-shop for ICT solutions offering a wide range of products and services for individuals, enterprises and Homes. Emtel’s innovations include the first 3G Network in Africa in 2004. Today with 4G and FTTB services it is one of the most technologically advanced operators in Africa. Emtel also offers international connectivity solutions via undersea Optical Fiber and state-of-the-art Tier 3 Data Centre Services. In June 2015 Emtel has launched the first Fiber Through the Air of the region, thus providing Unlimited Internet to the home with fiber like internet access services, where no underground cabling is required. With FTTA, Emtel truly becomes today a one-stop shop for the whole family and for the business (referred from <https://www.emtel.com/corporate-information>).

So, Emtel has approached my company to develop a payroll system for their company. So, in order to develop a good a payroll system a good methodology should be chosen.

**What is a methodology?**

* A methodology includes a collection of techniques that are used to complete activities and tasks, including modelling, for very aspect of the project.

**Why methodology is needed?**

* First of all, it provides guidelines for every facet of system development. In addition, it specifies an SDLC with activities and tasks as well as it gives a good planning which task must be executed according to the planning. Moreover, it also facilitates the analysis and design model that should be created. Methodology specifies techniques such as implementation, testing, deployment and support.

There are many types of methodologies. Each one has their strengths and their deficiencies. The best methodology for a payroll system would be waterfall system. As waterfall structure is easy to understand and simple so the staffs will be more comfortable to use it. In addition, it provides structures for inexperienced staffs, no need to train the newly recruited staffs or additional training for the already working staffs. The milestones will be understood easier by the staffs. Although, it is easy to manage due to the rigidity of the model as each phase has specific deliverables and a review process. When using waterfall structured, every phases are processed and completed one at a time so, phases do not overlap for better records. But once an application is in the [testing](http://istqbexamcertification.com/what-is-a-software-testing/) stage, it is very difficult to go back and change something that was not well-thought out in the concept stage this is the major disadvantage of using waterfall structure as each stage should be completed and tested in order to move to another stage. So, it is not recommended for big programs. Furthermore, there is a range of methodologies could have been used instead of waterfall structure. First of all, V-shaped model as it is easy to use but it does not contain risk analysis activities which is important when developing a payroll system. Prototyping as well may have been used as it may give a more accurate end product yet it will not be necessary for a small project such as a payroll system. After analyzing most of the methodologies waterfall system will suit this project.