Critically Examine these software development methodologies and state their major difference, weakness,strengths, give example of projects that can be implemented with any of these Methodologies:

* Waterfall Model
* Spiral Model
* Scrum Model

DIFFERENCE BETWEEN WATERFALL,SPIRAL AND SCRUM MODEL

|  |  |  |
| --- | --- | --- |
| WATERFALL MODEL | SPIRAL MODEL | SCRUM MODEL |
| * Waterfall model is relatively linear sequential design approach to develop software project | * Spiral Model is risk driven process model generator for software projects | * Valve driven |
| * Customer Involvement is minimum | * Customer involvement is high | * It is focus and adaptive |
| * Its impossible to go back to the previous phase | * Spiral model operate on iterates so it is possible to go back to previous phase | * Le-averages multiple concurrent learning loops |
| * It can be used for small projects and projects with clear requirement | * It can be used for large complex project that continuous risk * analysing | * It work is organized for fast feedback |
| * It is simple and easy | * It is a complex model |  |

STRENGHT AND WEAKNESS/WATERFALL MODEL

|  |  |
| --- | --- |
| STRENGHT | WEAKNESS |
| * It is suited for smaller projects where requirement are well defined | * It is not desirables for complex project where requirement changes frequently |
| * Any changes in software is made during the process of the development | * Small changes or error that arise in the completed software may cause a lot of problems |

SPIRAL MODEL

|  |  |
| --- | --- |
| STRENGHT | WEAKNESS |
| * Software is produced early in software life cycle | * Spiral may go on indefinitely |
| * It is good for large and complex projects | * It is not suitable for low risk projects |
| * Strong approval and documentation control | * End of the project may not be known early |
|  |  |

SRUM MODEL

|  |  |
| --- | --- |
|  | WEAKNESS |
| * It helps teams complete projects deliverables quickly and efficiently | * Daily meeting sometimes frustrate team members |
| * It ensures effective use of time and money | * Adopting the scrum framework in large terms is challenging |
| * Large projects id divided into easily manageable sprints | * The framework can be successful only with experienced team members |

**PROJECTS WATERFALL MODEL CAN USED FOR**

* Supply Chain Management
* System inventory managed system
* Point of sales
* Customers relationship management