Principles that Guide Practice

What is it ? a broad array of principles , concept , methods and tools that consider as planned and developed.
Who dose it ? practitioners , their managers .

Principles that guide :

Process

1. Be agile
2. Focus an quality
3. Be ready to adapt
4. Build an effective team
5. Establish mechanisms for communication **and** coordination
6. Mange change
7. Assess risk
8. Provide value for others

Practice

1. Divide and Conquer
2. Under stand the use of abstraction
3. Strive for consistency
4. Focus on transfer of information
5. Build software that exhibits effective modularity
6. Look for patterns (help software developer to resolve problems)
7. Represent the problem and solution
8. That some one will maintain the software

Communication Principles

1. Listen (focus on the word)
2. Prepare before you communication
3. Someone should facilitate the activity
4. Face to Face communication is the best
5. Take notes and document decisions
6. Strive for collaboration
7. Focused, modularize your discussion
8. something is unclear , draw a picture
9. Move on (agree , can't agree , unclear)

Agil Modeling Principles

1. software team (build software)
2. don't create more models than you need
3. Strive to produce the simplest model
4. Build models (amenable to change)
5. Explicit purpose for each model
6. Adapt the models you create to the
7. system at hand.
8. build useful models
9. Get feedback as soon as you can

Planning Principles

1. Understand the scope of the project
2. Involve the customer in the planning
3. Recognize that planning is iterative
4. Estimate based on what you know
5. Consider risk as you define the plan
6. Describe how you intend to accommodate change
7. Be realistic (100%)
8. Adjust granularity as you define the plan
9. Define how you intend to ensure quality
10. Track the plan

Deployment Principles

1. managed Customer expectations
2. complete delivery package
3. established A support regime
4. instructional materials
5. fixed first, delivered later

Modeling principles

Requirements models

analysis models

Customer requirements :
1- Information domain
2- Functional domain
3- Behavioural domain

Requirement Modeling principles

1. **The information domain of a problem** must be represented and understood
2. **The functions that the software performs** must be defined
3. **The behaviour of the software** must be represented
4. **The models** that depict information, function, and behaviour must be partitioned
5. **The analysis task** should move from essential information toward implementation detail

Construction Principles

1. **Coding principles** (programming)
2. **Testing principles** (uncover effort)

Preparation Principles

1. **Understand** (problem, basic design principles)
2. **Pick a programming** (language ,environment)
3. **Create a set of unit tests**

Living Modeling Principles

1. **Stakeholder-centric** specific (stakeholders – task)
2. **Models and code** (closely coupled)
3. **Bidirectional information flow** (models and code)
4. **Model information** (allow tracking system changes)
5. **Assigned stakeholder rights and responsibilities**
6. **The states of various model elements** (represented)

Design models

Characteristics of the software ,
construct effectively :
- Architecture
- Interface
- Component detail

Design Modeling principles

1. **Design** (traceable to the requirements model)
2. **consider the architecture of the system to be built**
3. **Design of data** is as important as design of processing functions
4. **Interfaces** (internal and external) designed with care
5. **User interface** design (tuned to the needs -ease of use)
6. **Component-level design** (functionally independent)
7. **Components** (loosely coupled)
8. **Design representations** (easily understandable)
9. **The design** (developed iteratively)

Validation Principles

1. **Perform unit tests and correct errors you've uncovered.**
2. **Refactor the code**

Testing Principles

1. planned long before testing begins
2. Pareto principle
3. begin small to the large
4. Static testing can yield high results
5. Track defects uncovered by testing
6. Include test cases (correctly)

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