Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

Identification: (Sa ubos magtuon)

1. _____- a systematic process of defining, designing, testing, and implementing a new application.
2. The four (4) fundamental phases common to all software development projects are _____.
3. The purpose of _____ is to convert the high-level requirements defined from user requirements into a list of detailed requirements, called _____, that can be used as inputs for creating models such as functional model.
4. _____- simply a statement of what the system must perform or what characteristic it must have.
5. _____- are determined from discussions with the client and determine their actual needs.
6. _____– this are requirements are directly related to the process a system has to perform or data it needs to contain.
7. _____– these requirements pertain to behavioral properties that a system must have, including operational, performance, security, and cultural and political.
8. _____– these specify the operating environment(s) in which the system must perform, as well as how these might change over time.
9. _____– these deal with issues related to performance such as response time, capacity, and reliability of the system.
10. _____– these address issues with security, such as who has access to the system's data and must have the ability to protect data from disruption or data loss.
11. _____– these deal with issues related to the cultural and political factors and legal requirements that affect the system.
12. _____- is a documentation that lists the functional and non-functional requirements of a system in an outline format and defines the scope of the system or software.
13. _____- is the process of cooperating with clients or users to determine what requirements are needed.
14. _____- collect information and list the business or user requirements that were defined from that information.
15. _____– is the most commonly used requirement-gathering technique.

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

16. _____– The first step in interviewing is to create an interview schedule that lists who will be interviewed, when, and for what purpose.
17. _____- are those that require a specific answer.
18. _____- require the interviewee to answer in open text format where they can answer based on their complete understanding and knowledge.
19. _____- follow up on what has just been discussed from close-ended or open-ended questions in order to learn more.
20. _____– is important for an interviewer to prepare for the interview. The interviewer should have a general interview plan listing the questions to be asked in the appropriate order and should anticipate possible answers and provide follow-up with them.
21. _____– The interviewer should start with an explanation of why s/he is conducting the interview and explain why the interviewee is there.
22. _____– After the interview, the analyst must prepare an interview report that describes the information from the interview.
23. _____– is an information-gathering technique that allows the project team, users, and management to work together to identify requirements for the system.
24. _____– The process of selecting participants for a JAD session is the same as the process of selecting interviewee in the interview technique.
25. _____– The time cover of JAD session is depending on the size and scope of the project the session can.
26. _____– JAD sessions can go beyond the depth of a typical interview, so it is important to prepare the analysts and participants for a JAD session.
27. _____– JAD sessions follows a formal agenda and rules that define appropriate behavior.
28. _____– JAD post-session report is prepared and circulated among the participants.
29. _____– These are a set of written questions used to obtain information from individuals.
30. _____– As with interviews and JAD sessions, the first step is to identify the individuals to whom the questionnaires will be sent.
31. _____– Questions on questionnaires must be clearly written and leave little room for misunderstanding, so closed-ended questions are mostly used.
32. _____– When administering the questionnaires, the key issues are how to make sure that participants will complete the questionnaire and send it back.

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

33. _____– It is important to process the returned questionnaires and develop a questionnaire report soon after the questionnaire's deadline.
34. _____– This is often used by project teams to understand the current system (as-is system) of an organization.
35. _____– This is the act of watching processes being performed.
36. _____– Some techniques are more suited for use at different stages of the analysis process.
37. _____– This refers to how rich and detailed the information is that the technique usually produces and the extent to which the technique is useful for obtaining not only facts and opinions but also an understanding of why those facts and opinions exist.
38. _____– This refers to the range of information and information sources that can be easily collected using the chosen technique.
39. _____– One of the most challenging aspects of requirements-gathering is integrating the information from different sources or people.
40. _____– This refers to the amount of time and energy the intended users of the new system must devote to the analysis process.
41. _____– This defines the cost to spend when using each technique and does not imply if a technique is more or less effective than the other techniques.
42. _____- is conducted to determine if the specified requirements are actually required.
43. _____– The requirement is really needed or specifies an essential factor on the system
44. _____– The requirement is stated that it should only be interpreted in only one (1) way.
45. _____– The requirement should not have conflicts with other requirements.
46. _____– The requirement must completely describe the necessary functionality that will result to meet the user's need.
47. _____– The requirement statement includes only one (1) requirement with no use of conjunctions.
48. _____– The requirement is achievable within system constraints such as time, cost, legal, and available resources.
49. _____– the implemented system or software can be tested to prove that the specified requirement has been met.
50. _____– satisfies all the other characteristics of a good requirement, then the requirement must have a unique identifier to trace all changes to it throughout the development life cycle.

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

51. _____- is a list of questions which the analyst will use to assess each requirement.
52. _____ - a visual modeling language that provides a visual means of developing and documenting object-oriented software and systems.
53. _____- one of the UML diagrams.
54. _____- a person or a system that represents the role of someone interacting with the system or software and is the user of the system.
55. _____- represents the functionality of a system.
56. _____ - represents the system's scope of which a set of use-cases are applied.
57. _____- a line between actor and use-case.
58. _____- a directed relationship between two (2) use-cases when required.
59. _____- indicates optional functionality under a certain use-case.
60. _____- represents a specialized use-case to a more generalized one.
61. _____- this helps analysts to get a complete overview of the underlying business process being modeled.
62. _____- the analysts must identify the subject's boundaries. This helps the analysts in identifying the scope of the system.
63. _____- the analysts must identify the primary and secondary actors that will be involved on the subject and their goals.
64. _____- the analysts must create use-cases for every identified goal of actors.
65. _____- it is important to review the identified set of use-cases carefully.
66. _____- the first thing to do.
67. _____- place the actors in the diagram.
68. _____- will form the border of the subject, separating use-cases from actors.
69. _____- drawing lines to connect the actors to the use-cases with which they interact.

Five (5) basic steps to the interview:

- _____

- _____

- _____

- _____

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

- Post-Interview Follow-up

Three (3) types of interview questions:

- _____

- _____

- _____

Five (5) basic steps to the JAD approach:

- _____

- _____

- _____

- _____

- _____

Four (4) steps when using questionnaires as a gathering technique:

- _____

- _____

- _____

- _____

Following characteristics that describe the strengths and weaknesses of each technique:

- _____

- _____

- _____

- _____

- _____

- _____

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

Different stages of the analysis process, namely:

- _____

- _____

- _____

Good requirement should possess the following characteristics:

- _____

- _____

- _____

- _____

- _____

- _____

- _____

- _____

Following steps in identifying major use-cases:

- _____

- _____

- _____

- _____

- _____

Four (4) major steps in drawing a use-case diagram:

- _____

- _____

- _____

- _____

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

Answer Key:

1. **Systems development or applications development** - a systematic process of defining, designing, testing, and implementing a new application.
2. The four (4) fundamental phases common to all software development projects are **planning, analysis, design, and implementation**.
3. The purpose of **requirements determination** is to convert the high-level requirements defined from user requirements into a list of detailed requirements, called **requirements definition report**, that can be used as inputs for creating models such as functional model.
4. **Requirement** - simply a statement of what the system must perform or what characteristic it must have.
5. **User requirements** - are determined from discussions with the client and determine their actual needs.
6. **Functional requirements** – this are requirements are directly related to the process a system has to perform or data it needs to contain.
7. **Non-functional requirements** – these requirements pertain to behavioral properties that a system must have, including operational, performance, security, and cultural and political.
8. **Operational requirements** – these specify the operating environment(s) in which the system must perform, as well as how these might change over time.
9. **Performance requirements** – these deal with issues related to performance such as response time, capacity, and reliability of the system.
10. **Security requirements** – these address issues with security, such as who has access to the system's data and must have the ability to protect data from disruption or data loss.
11. **Cultural and political requirements** – these deal with issues related to the cultural and political factors and legal requirements that affect the system.
12. **Requirements definition report (requirements specification document)** - is a documentation that lists the functional and non-functional requirements of a system in an outline format and defines the scope of the system or software.
13. **Requirements gathering (requirements elicitation)** - is the process of cooperating with clients or users to determine what requirements are needed.
14. **Requirements-gathering techniques** - collect information and list the business or user requirements that were defined from that information.
15. **Interviews** – is the most commonly used requirement-gathering technique.

16. **Selecting Interviewees** – The first step in interviewing is to create an interview schedule that lists who will be interviewed, when, and for what purpose.
17. **Close-ended questions** - are those that require a specific answer.
18. **Open-ended questions** - require the interviewee to answer in open text format where they can answer based on their complete understanding and knowledge.
19. **Probing questions** - follow up on what has just been discussed from close-ended or open-ended questions in order to learn more.
20. **Prepare for the Interview** – is important for an interviewer to prepare for the interview. The interviewer should have a general interview plan listing the questions to be asked in the appropriate order and should anticipate possible answers and provide follow-up with them.
21. **Conduct the Interview** – The interviewer should start with an explanation of why s/he is conducting the interview and explain why the interviewee is there.
22. **Post-Interview Follow-up** – After the interview, the analyst must prepare an interview report that describes the information from the interview.
23. **Joint Application Development (JAD)** – is an information-gathering technique that allows the project team, users, and management to work together to identify requirements for the system.
24. **Selecting Participants** – The process of selecting participants for a JAD session is the same as the process of selecting interviewee in the interview technique.
25. **Designing JAD Session** – The time cover of JAD session is depending on the size and scope of the project the session can.
26. **Preparing for the JAD Session** – JAD sessions can go beyond the depth of a typical interview, so it is important to prepare the analysts and participants for a JAD session.
27. **Conducting the JAD Session** – JAD sessions follows a formal agenda and rules that define appropriate behavior.
28. **Post-JAD Follow-up** – JAD post-session report is prepared and circulated among the participants.
29. **Questionnaires** – These are a set of written questions used to obtain information from individuals.
30. **Selecting Participants** – As with interviews and JAD sessions, the first step is to identify the individuals to whom the questionnaires will be sent.
31. **Designing a Questionnaire** – Questions on questionnaires must be clearly written and leave little room for misunderstanding, so closed-ended questions are mostly used.

32. **Administering the Questionnaire** – When administering the questionnaires, the key issues are how to make sure that participants will complete the questionnaire and send it back.
33. **Questionnaire Follow-up** – It is important to process the returned questionnaires and develop a questionnaire report soon after the questionnaire's deadline.
34. **Document Analysis** – This is often used by project teams to understand the current system (as-is system) of an organization.
35. **Observation** – This is the act of watching processes being performed.
36. **Type of information** – Some techniques are more suited for use at different stages of the analysis process.
37. **Depth of Information** – This refers to how rich and detailed the information is that the technique usually produces and the extent to which the technique is useful for obtaining not only facts and opinions but also an understanding of why those facts and opinions exist.
38. **Breadth of Information** – This refers to the range of information and information sources that can be easily collected using the chosen technique.
39. **Integration of Information** – One of the most challenging aspects of requirements-gathering is integrating the information from different sources or people.
40. **User Involvement** – This refers to the amount of time and energy the intended users of the new system must devote to the analysis process.
41. **Cost** – This defines the cost to spend when using each technique and does not imply if a technique is more or less effective than the other techniques.
42. **Requirements analysis** - is conducted to determine if the specified requirements are actually required.
43. **Necessary** – The requirement is really needed or specifies an essential factor on the system
44. **Unambiguous** – The requirement is stated that it should only be interpreted in only one (1) way.
45. **Consistent** – The requirement should not have conflicts with other requirements.
46. **Complete** – The requirement must completely describe the necessary functionality that will result to meet the user's need.
47. **Singular** – The requirement statement includes only one (1) requirement with no use of conjunctions.
48. **Feasible** – The requirement is achievable within system constraints such as time, cost, legal, and available resources.
49. **Verifiable** – the implemented system or software can be tested to prove that the specified requirement has been met.

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

50. **Traceable** – satisfies all the other characteristics of a good requirement, then the requirement must have a unique identifier to trace all changes to it throughout the development life cycle.
51. **Checklist** - is a list of questions which the analyst will use to assess each requirement.
52. **Unified Modeling Language (UML)** - a visual modeling language that provides a visual means of developing and documenting object-oriented software and systems.
53. **use-case diagram** - one of the UML diagrams.
54. **Actor** - a person or a system that represents the role of someone interacting with the system or software and is the user of the system.
55. **Use-case** - represents the functionality of a system.
56. **subject boundary box** - represents the system's scope of which a set of use-cases are applied.
57. **association relationship** - a line between actor and use-case.
58. **include relationship** - a directed relationship between two (2) use-cases when required.
59. **extended relationship** - indicates optional functionality under a certain use-case.
60. **generalization relationship** - represents a specialized use-case to a more generalized one.
61. **Review requirements definition** - this helps analysts to get a complete overview of the underlying business process being modeled.
62. **Identify subject's boundaries** - the analysts must identify the subject's boundaries. This helps the analysts in identifying the scope of the system.
63. **Identify primary and secondary actors and goals** - the analysts must identify the primary and secondary actors that will be involved on the subject and their goals.
64. **Identify business process and major use-cases** - the analysts must create use-cases for every identified goal of actors.
65. **Review current set of use-cases** - it is important to review the identified set of use-cases carefully.
66. **Place and draw use-cases** - the first thing to do.
67. **Place and draw actors** - place the actors in the diagram.
68. **Draw subject boundary** - will form the border of the subject, separating use-cases from actors.
69. **Add associations** - drawing lines to connect the actors to the use-cases with which they interact.

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

Five (5) basic steps to the interview:

- Selecting Interviewees
- Designing Interview Questions
- Prepare for the Interview
- Conduct the Interview
- Post-Interview Follow-up

Three (3) types of interview questions:

- Close-ended questions
- Open-ended questions
- Probing questions

Five (5) basic steps to the JAD approach:

- Selecting Participants
- Designing JAD Session
- Preparing for the JAD Session
- Conducting the JAD Session
- Post-JAD Follow-up

Four (4) steps when using questionnaires as a gathering technique:

- Selecting Participants
- Designing a Questionnaire
- Administering the Questionnaire
- Questionnaire Follow-up

Following characteristics that describe the strengths and weaknesses of each technique:

- Type of information
- Depth of Information

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

- Breadth of Information

- Integration of Information

- User Involvement

- Cost

Different stages of the analysis process, namely:

- understanding the three (3) stages: current system (as-is system)

- identifying improvements

- developing a new system (to-be system)

Good requirement should possess the following characteristics:

- Necessary

- Unambiguous

- Consistent

- Complete

- Singular

- Feasible

- Verifiable

- Traceable

Following steps in identifying major use-cases:

- Review requirements definition

- Identify subject’s boundaries

- Identify primary and secondary actors and goals.

- Identify business process and major use-cases.

- Review current set of use-cases.

Subject Name: Application Development and Emerging Technologies **Module**: 2

Quarter: Prelim

Four (4) major steps in drawing a use-case diagram:

- Place and draw use-cases

- Place and draw actors

- Draw subject boundary

- Add associations