Risk Identification

- Risk identification is the process of determining risks that could potentially prevent the program, enterprise, or investment from achieving its objectives. It includes documenting and communicating the concern.
- A Checklist of common risks may be used to identify the risks in a project
    - Technology risks
    - People risks
    - Organizational risks
    - Requirement risks
    - Estimation risks

Risk Type	Possible Risks
Technology	• The database used in the system cannot process as many transaction per second as expected.(1) • Reusable Components contain defects that mean they cannot be reused as planned.(2)
People	• Team members are ill and unavailable at Critical times.(3) • Required training or knowledge for team member is not available.(4) • Failure to gain the client/supervisor involvement (5)
Organizational	• Lack of Supervisor meeting schedule management.(6) • Inefficient to make progress report and submission.(7)
Tools	• The code generated by software code generation tools and plugins are inefficient.(8) • Software tools cannot work together in an integrated way.(9)
Requirements	• Misunderstanding of requirements.(10) • Client fail to understand the impact of requirement changes.(11) • Develop the wrong software function.(12)
Estimation	• The time required to develop the software is underestimated.(13) • The size of software is underestimated.(14) • Unrealistic schedule and plan to complete the project.(15)

Risk Analysis

- Risk analysis is the process of identifying and analyzing potential issues that could negatively impact key business initiatives or critical projects in order to help organizations avoid or mitigate those risks.
- The Probability of the risk might be assessed as very low (<10%), low (10-20%), Moderate (25-50%), High (50-75%), or Very high (>75%).
- The effect of the risk might be assessed as catastrophic (Threaten the survival of the project), serious (would cause major delays), tolerable (delays are within allowed contingency/possibility), or insignificant.

Risk	Probability	Effects
The database used in the system cannot process as many transaction per second as expected.(1)	Low	Serious
Reusable Components contain defects that mean they cannot be reused as planned.(2)	Moderate	Serious
Team members are ill and unavailable at Critical times.(3)	Low	Tolerable
Required training or knowledge for team member is not available.(4)	Moderate	Tolerable
Failure to gain the client/supervisor involvement (5)	Moderate	Tolerable
Lack of Supervisor meeting schedule management.(6)	Moderate	Serious
Inefficient to make progress report and submission.(7)	Low	Tolerable
The code generated by software code generation tools and plugins are inefficient.(8)	Moderate	Serious
Software tools cannot work together in an integrated way.(9)	High	Catastrophic
Misunderstanding of requirements.(10)	Low	Catastrophic
Client fail to understand the impact of requirement changes.(11)		Tolerable
Develop the wrong software function.(12)	Moderate	Catastrophic
The time required to develop the software is underestimated.(13)	High	Serious
The size of software is underestimated.(14)	low	Tolerable
Unrealistic schedule and plan to complete the project.(15)	High	Serious

- Use a **Scenario Analysis** to assess the risk event impact

Risk Event	Likelihood	Impact	Detention Difficulty	When
The database used in the system cannot process as many transaction per second as expected.(1)	**2**	**4**	**4**	Conversation
Reusable Components contain defects that mean they cannot be reused as planned.(2)	**2**	**3**	**3**	During Development
Required training or knowledge for team member is not available.(4)	**3**	**3**	**3**	During Development & Post Installation
Inefficient to make progress report and submission.(7)	**2**	**2**	**2**	During Development
The code generated by software code generation tools and plugins are inefficient.(8)	**3**	**4**	**3**	During Development
Software tools cannot work together in an integrated way.(9)	**5**	**5**	**5**	During Software life circle
Misunderstanding of requirements.(10)	**2**	**4**	**2**	Start Up
Client fail to understand the impact of requirement changes.(11)	**2**	**4**	**3**	During Software life circle
Develop the wrong software function.(12)	**1**	**3**	**2**	During Software life circle
The time required to develop the software is underestimated.(13)	**4**	**5**	**5**	During Software life circle
The size of software is underestimated.(14)	**2**	**3**	**2**	During Development
Unrealistic schedule and plan to complete the project.(15)	**4**	**5**	**5**	During Software life circle
Failure to gain the client/supervisor involvement (5)	**2**	**2**	**2**	During Software life circle
Lack of Supervisor meeting schedule management.(6)	**2**	**3**	**2**	During Software life circle
Team members are ill and unavailable at Critical times.(3)	**1**	**2**	**1**	During Software life circle

- Ranking the risk importance based

		Severity			
		NEGLIGIBLE small/unimportant; not likely to have a major effect on the operation of the event	MARGINAL minimal importance; has an effect on the operation of event but will not affect the event outcome	CRITICAL serious/important; will affect the operation of the event in a negative way	CATASTROPHIC maximum importance; WILL affect the operation of the event in a negative way
Probability	LOW This risk has rarely been a problem	LOW (**1**)	MEDIUM (**4**)	MEDIUM (**6**)	HIGH (**10**)
	MEDIUM This risk will MOST LIKELY occur at this event	LOW (**2**)	MEDIUM (**5**)	HIGH (**8**)	EXTREME (**11**)
	HIGH This risk WILL occur at this event, possibly multiple times, and has occurred in the past	MEDIUM (**3**)	HIGH (**7**)	HIGH (**9**)	EXTREME (**12**)

Explanation of Risk Ranking		
LOW	MEDIUM	If the consequences to this event/activity are LOW / MEDIUM, group should be OK to proceed with this event/activity. It is advised that if the activity is MEDIUM, risk mitigation efforts should be made.
HIGH		If the consequences to this event/activity are HIGH, it is advised that we seek additional event planning support.
EXTREME		If the consequences to this event/activity are EXTREME, it is advised that we **do not hold** this event without prior consultation with Risk Management

Risk Assessment Table

List All Activities	**Associated Risk(s)** *Risk(s) associated with the activity*	**Severity** *Level of impact*	**Probability** *The chances of that risk happening*	**Risk Score** *Risk score, found by combining impact and probability on the risk matrix*
Technology	The database used in the system cannot process as many transaction per second as expected.(1)	Marginal	Medium	Medium(5)
	Reusable Components contain defects that mean they cannot be reused as planned.(2)	Critical	Medium	High(8)
People	Team members are ill and unavailable at Critical times.(3)	Negligible	Low	Low(1)

	Required training or knowledge for team member is not available.(4)	Critical	Medium	Medium(6)
	Failure to gain the client/supervisor involvement (5)	Negligible	Medium	Low(2)
Organizational	Lack of Supervisor meeting schedule management.(6)	Marginal	Medium	Medium(5)
	Inefficient to make progress report and submission.(7)	Marginal	Low	Medium(4)
Tools	The code generated by software code generation tools and plugins are inefficient.(8)	Critical	High	High(9)
	Software tools cannot work together in an integrated way.(9)	Catastrophic	High	Extreme (12)
Requirements	Misunderstanding of requirements.(10)	Marginal	Low	Medium(4)
	Client fail to understand the impact of requirement changes.(11)	Marginal	Medium	Medium(5)
	Develop the wrong software function.(12)	Catastrophic	Medium	Extreme (11)
Estimation	The time required to develop the software is underestimated.(13)	Marginal	High	High(7)
	The size of software is underestimated.(14)	Negligible	High	Medium(3)
	Unrealistic schedule and plan to complete the project.(15)	Catastrophic	Low	High(10)