Assignment:

Mapping Processes

Duration: 120 Minutes

Exploring the Project Management Processes

For your PMI exam, it's important to recognize all of the processes, the knowledge areas, and the process groups. In this assignment, you will identify all of the these processes, their inputs, tools and techniques, and outputs. While it's not essential to memorize the ITTOs, it's important to be familiar with the components needed for all of the processes.

	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Integration Management					
Project Scope Management					
Project Schedule Management					
Project Cost Management					
Project Quality Management					
Project Resource Management					

	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Communications Management					
Project Risk Management					
Project Procurement Management					
Project Stakeholder Management					
Project Integration Management	Develop Project Charter	Develop Project Management Plan	Direct and Manage Project Work Manage Project Knowledge	Monitor and Control Project Work Perform Integrated Change Control	Close Project or Phase
Project Scope Management		Plan Scope Management Collect Requirements Define Scope Create WBS		Validate Scope Control Scope	

	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Schedule Management		Plan Schedule Management Define Activities Sequence Activities Estimate Activity Durations Develop Schedule		Control Schedule	
Project Cost Management		Plan Cost Management Estimate Costs Determine Budget		Control Costs	
Project Quality Management		Plan Quality Management	Manage Quality	Control Quality	
Project Resource Management		Plan Resource Management Estimate Activity Resources	Acquire Resources Develop Team Manage Team	Control Resources	
Project Communications Management		Plan Communications Management	Manage Communications	Monitor Communications	
Project Risk Management		Plan Risk Management Identify Risks Perform Qualitative Analysis	Implement Risk Responses	Monitor Risks	

	Initiating	Planning	Executing	Monitoring and Controlling	Closing
		Perform Quantitative Analysis Plan Risk Responses			
Project Procurement Management		Plan Procurement Management	Conduct Procurements	Control Procurements	
Project Stakeholder Management	Identify Stakeholders	Plan Stakeholder Engagement	Manage Stakeholder Engagements	Monitor Stakeholder Engagement	

Lab Solution: Mapping the ITTOs

4.1 Develop Project Charter		
Inputs	**Tools & Techniques**	**Outputs**

4.2 Develop Project Management Plan		
Inputs	**Tools & Techniques**	**Outputs**

4.3 Direct and Manage Project Work

Inputs	Tools & Techniques	Outputs

4.4 Manage Project Knowledge

Inputs	Tools & Techniques	Outputs

4.5 Monitor and Control Project Work

Inputs	Tools & Techniques	Outputs

4.6 Perform Integrated Change Control

Inputs	Tools & Techniques	Outputs

4.7 Close project or Phase

Inputs	Tools & Techniques	Outputs

5.1 Plan Scope Management		
Inputs	**Tools & Techniques**	**Outputs**

5.2 Collect Requirements

Inputs	Tools & Techniques	Outputs

5.3 Define Scope

Inputs	Tools & Techniques	Outputs

5.4 Create WBS		
Inputs	**Tools & Techniques**	**Outputs**

5.5 Validate Scope		
Inputs	**Tools & Techniques**	**Outputs**

5.6 Control Scope

Inputs	Tools & Techniques	Outputs

6.1 Plan Schedule Management		
Inputs	**Tools & Techniques**	**Outputs**

6.2 Define Activities

Inputs	Tools & Techniques	Outputs

6.3 Sequence Activities

Inputs	Tools & Techniques	Outputs

6.4 Estimate Activity Durations

Inputs	Tools & Techniques	Outputs

6.5 Develop Schedule

Inputs	Tools & Techniques	Outputs

6.6 Control Schedule

Inputs	Tools & Techniques	Outputs

7.1 Plan Cost Management		
Inputs	**Tools & Techniques**	**Outputs**

7.2 Estimate Costs

Inputs	Tools & Techniques	Outputs

7.3 Determine Budget

Inputs	Tools & Techniques	Outputs

7.4 Control Costs

Inputs	Tools & Techniques	Outputs

8.1 Plan Quality Management

Inputs	Tools & Techniques	Outputs

8.2 Manage Quality

Inputs	Tools & Techniques	Outputs

8.3 Control Quality

Inputs	Tools & Techniques	Outputs

9.1 Plan Resource Management

Inputs	Tools & Techniques	Outputs

9.2 Estimate Activity Resources

Inputs	Tools & Techniques	Outputs

9.3 Acquire Resources

Inputs	Tools & Techniques	Outputs

9.4 Develop Team

Inputs	Tools & Techniques	Outputs

9.5 Manage Team		
Inputs	**Tools & Techniques**	**Outputs**

9.6 Control Resources

Inputs	Tools & Techniques	Outputs

10.1 Plan Communications Management

Inputs	Tools & Techniques	Outputs

10.2 Manage Communications

Inputs	Tools & Techniques	Outputs

10.3 Monitor Communications

Inputs	Tools & Techniques	Outputs

11.1 Plan Risk Management

Inputs	Tools & Techniques	Outputs
Organizational process assets		

11.2 Identify Risks

Inputs	Tools & Techniques	Outputs

11.3 Perform Qualitative Risk Analysis

Inputs	Tools & Techniques	Outputs

11.4 Perform Qualitative Risk Analysis

Inputs	Tools & Techniques	Outputs

11.5 Plan Risk Responses

Inputs	Tools & Techniques	Outputs

11.5 Plan Risk Responses

	Decision making	

11.6 Implement Risk Responses

Inputs	Tools & Techniques	Outputs

11.7 Monitor Risks

Inputs	Tools & Techniques	Outputs

12.1 Plan Procurement Management

Inputs	Tools & Techniques	Outputs

12.1 Plan Procurement Management

12.2 Conduct Procurements

Inputs	Tools & Techniques	Outputs

12.3 Control Procurements

Inputs	Tools & Techniques	Outputs

13.1 Identify Stakeholders

Inputs	Tools & Techniques	Outputs

13.2 Plan Stakeholder Engagement

Inputs	Tools & Techniques	Outputs

13.3 Manage Stakeholder Engagement

Inputs	Tools & Techniques	Outputs

13.4 Monitor Stakeholder Engagement

Inputs	Tools & Techniques	Outputs

Lab Solution: Exploring the Project Management Processes

	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Integration Management	Develop Project Charter	Develop Project Management Plan	Direct and Manage Project Work Manage Project Knowledge	Monitor and Control Project Work Perform Integrated Change Control	Close Project or Phase
Project Scope Management		Plan Scope Management Collect Requirements Define Scope Create WBS		Validate Scope Control Scope	
Project Schedule Management		Plan Schedule Management Define Activities Sequence Activities Estimate Activity Durations Develop Schedule		Control Schedule	
Project Cost Management		Plan Cost Management Estimate Costs Determine Budget		Control Costs	
Project Quality Management		Plan Quality Management	Manage Quality	Control Quality	
Project Resource Management		Plan Resource Management Estimate Activity Resources	Acquire Resources Develop Team Manage Team	Control Resources	
Project Communications Management		Plan Communications Management	Manage Communications	Monitor Communications	

	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Project Risk Management		Plan Risk Management Identify Risks Perform Qualitative Analysis Perform Quantitative Analysis Plan Risk Responses	Implement Risk Responses	Monitor Risks	
Project Procurement Management		Plan Procurement Management	Conduct Procurements	Control Procurements	
Project Stakeholder Management	Identify Stakeholders	Plan Stakeholder Engagement	Manage Stakeholder Engagements	Monitor Stakeholder Engagement	

Lab Solution: Mapping the ITTOs

4.1	Develop Project Charter		
	Inputs	**Tools & Techniques**	**Outputs**
	Business documents	Expert judgment	Project charter
	Agreements	Data gathering	Assumption log
	Enterprise environmental factors	Interpersonal and team skills	
	Organizational process assets	Meetings	

4.2	Develop Project Management Plan		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Project management plan
	Outputs from other processes	Data gathering	
	Enterprise environmental factors	Interpersonal and team skills	
	Organizational process assets	Meetings	

4.3	Direct and Manage Project Work		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Deliverables
	Project documents	Project management information system	Work performance data
	Approved change requests	Meetings	Issue log
	Enterprise environmental factors		Change requests
	Organizational process assets		Project management plan updates
			Project documents updates
			Organizational process assets updates

4.4	Manage Project Knowledge		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Lessons learned register
	Project documents	Knowledge management	Project management plan updates
	Deliverables	Information management	Organizational process assets updates
	Enterprise environmental factors	Interpersonal and team skills	
	Organizational process assets		

4.5	Monitor and Control Project Work		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Work performance reports
	Project documents	Data analysis	Change requests
	Work performance information	Decision making	Project management plan updates
	Agreements	Meetings	Project documents updates
	Enterprise environmental factors		
	Organizational process assets		

4.6	Perform Integrated Change Control		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Approved change requests
	Project documents	Change control tools	Project management plan updates
	Work performance reports	Data analysis	Project documents updates
	Change requests	Decision making	
	Enterprise environmental factors	Meetings	
	Organizational process assets		

4.7	Close project or Phase		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Project documents updates
	Project management plan	Data analysis	Final product, service, or result transition
	Project documents	Meetings	Final report
	Accepted deliverables		Organizational process assets updates
	Business documents		
	Agreements		
	Procurement documentation		
	Organizational process assets		

5.1	Plan Scope Management		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Scope management plan
	Project management plan	Data analysis	Requirements management plan
	Enterprise environmental factors	Meetings	
	Organizational process assets		

5.2	Collect Requirements		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Requirements documentation
	Project management plan	Data gathering	Requirements traceability matrix
	Project documents	Data analysis	
	Business documents	Decision making	
	Agreements	Data representation	
	Enterprise environmental factors	Interpersonal and team skills	
	Organizational process assets	Context diagram	
		Prototypes	

5.3	Define Scope		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Project scope statement
	Project management plan	Data analysis	Project documents updates
	Project documents	Decision making	
	Enterprise environmental factors	Interpersonal and team skills	
	Organizational process assets	Product analysis	

5.4	Create WBS		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Scope baseline
	Project documents	Decomposition	Project documents updates
	Enterprise environmental factors		
	Organizational process assets		

5.5	Validate Scope		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Inspection	Accepted deliverables
	Project documents	Decision making	Work performance information
	Verified deliverables		Change requests
	Work performance data		Project documents updates

5.6	Control Scope		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Data analysis	Work performance information
	Project documents		Change requests
	Work performance data		Project management plan updates
	Organizational process assets		Project documents updates

6.1	Plan Schedule Management		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Schedule management plan
	Project management plan	Data analysis	
	Enterprise environmental factors	Meetings	
	Organizational process assets		

6.2	Define Activities		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Activity list
	Enterprise environmental factors	Decomposition	Activity attributes
	Organizational process assets	Rolling wave planning	Milestone list
		Meetings	Change requests
			Project management plan updates

6.3	Sequence Activities		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Precedence diagramming method	Project schedule network diagrams
	Project documents	Dependency determination and integration	Project documents updates
	Enterprise environmental factors	Leads and lags	
	Organizational process assets	Project management information system	

6.4	Estimate Activity Durations		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Duration estimates
	Project documents	Analogous estimating	Basis of estimates
	Enterprise environmental factors	Parametric estimating	Project documents updates
	Organizational process assets	Three-point estimating	
		Bottom-up estimating	
		Data analysis	
		Decision making	
		Meetings	

6.5	Develop Schedule		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Schedule network analysis	Schedule baseline
	Project documents	Critical path method	Project schedule
	Agreements	Resource optimization	Schedule data
	Enterprise environmental factors	Data analysis	Project calendars
	Organizational process assets	Leads and lags	Change requests
		Schedule compression	Project management plan updates
		Project management information system	Project documents updates
		Agile release planning	

6.6	Control Schedule		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Data analysis	Work performance information
	Project documents	Critical path method	Schedule forecasts
	Work performance data	Project management information system	Change requests
	Organizational process assets	Resource optimization	Project management plan updates
		Leads and lags	Project documents updates
		Schedule compression	

7.1	Plan Cost Management		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Cost management plan
	Project management plan	Data analysis	
	Enterprise environmental factors	Meetings	
	Organizational process assets		

7.2	Estimate Costs		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Cost estimates
	Project documents	Analogous estimating	Basis of estimates
	Enterprise environmental factors	Parametric estimating	Project documents updates
	Organizational process assets	Bottom-up estimating	
		Three-point estimating	
		Data analysis	
		Project management information system	
		Decision making	

7.3	Determine Budget		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Cost baseline
	Project documents	Cost aggregation	Project funding requirements
	Business documents	Data analysis	Project documents updates
	Agreements	Historical information review	
	Enterprise environmental factors	Funding limit reconciliation	
	Organizational process assets	Financing	

7.4	Control Costs		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Work performance information
	Project documents	Data analysis	Cost forecasts
	Project funding requirements	To-complete performance index	Change requests
	Work performance data	Project management information system	Project management plan updates
	Organizational process assets		Project documents updates

8.1	Plan Quality Management		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Quality management plan
	Project management plan	Data gathering	Quality metrics
	Project documents	Data analysis	Project management plan updates
	Enterprise environmental factors	Decision making	Project documents updates
	Organizational process assets	Data representation	
		Test and inspection planning	
		Meetings	

8.2	Manage Quality		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Data gathering	Quality reports
	Project documents	Data analysis	Test and evaluation documents
	Organizational process assets	Decision making	Change requests
		Data representation	Project management plan updates
		Audits	Project documents updates
		Design for X	
		Problem solving	
		Quality improvement methods	

8.3	Control Quality		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Data gathering	Quality control measurements
	Project documents	Data analysis	Verified deliverables
	Approved change requests	Inspection	Work performance information
	Deliverables	Testing/product evaluations	Change requests
	Work performance data	Data representation	Project management plan updates
	Enterprise environmental factors	Meetings	Project documents updates
	Organizational process assets		

9.1	Plan Resource Management		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Resource management plan
	Project management plan	Data representation	Team charter
	Project documents	Organizational theory	Project documents updates
	Enterprise environmental factors	Meetings	
	Organizational process assets		

9.2	Estimate Activity Resources		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Resource requirements
	Project documents	Bottom-up estimating	Basis of estimates
	Enterprise environmental factors	Analogous estimating	Resource breakdown structure
	Organizational process assets	Parametric estimating	Project documents updates
		Data analysis	
		Project management information system	
		Meetings	

9.3	Acquire Resources		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Decision making	Physical resource assignments
	Project documents	Interpersonal and team skills	Project team assignments
	Enterprise environmental factors	Pre-assignment	Resource calendars
	Organizational process assets	Virtual teams	Change requests
			Project management plan updates
			Project documents updates
			Enterprise environmental factors updates
			Organizational process assets updates

9.4	Develop Team		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Colocation	Team performance assessments
	Project documents	Virtual teams	Change requests
	Enterprise environmental factors	Communication technology	Project management plan updates
	Organizational process assets	Interpersonal and team skills	Project documents updates
		Recognition and rewards	Enterprise environmental factors updates
		Training	Organizational process assets updates
		Individual and team assessments	
		Meetings	

9.5	Manage Team		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Interpersonal and team skills	Change requests
	Project documents	Project management information system	Project management plan updates
	Work performance reports		Project documents updates
	Team performance assessments		Enterprise environmental factors updates
	Enterprise environmental factors		
	Organizational process assets		

9.6	Control Resources		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Data analysis	Work performance information
	Project documents	Problem solving	Change requests
	Work Performance data	Interpersonal and team skills	Project management plan updates
	Agreements	Project management information system	Project documents updates
	Organizational process assets		

10.1	Plan Communications Management		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Communications management plan
	Project management plan	Communication requirements analysis	Project management plan updates
	Project documents	Communication technology	Project documents update
	Enterprise environmental factors	Communication models	
	Organizational process assets	Communication methods	
		Interpersonal and team skills	
		Data representation	
		Meetings	

10.2	Manage Communications		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Communication technology	Project communications
	Project documents	Communication methods	Project management plan updates
	Work performance reports	Communication skills	Project documents updates
	Enterprise environmental factors	Project management information system	Organizational process assets updates
	Organizational process assets	Interpersonal and team skills	
		Meetings	

10.3	Monitor Communications		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Work performance information
	Project documents	Project management information system	Change requests
	Work performance data	Data representation	Project management plan updates
	Enterprise environmental factors	Interpersonal and team skills	Project documents updates
	Organizational process assets	Meetings	

11.1	Plan Risk Management		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Risk management plan
	Project management plan	Data analysis	
	Project documents	Meetings	
	Enterprise environmental factors		
	Organizational process assets		

11.2	Identify Risks		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Risk register
	Project documents	Data gathering	Risk report
	Agreements	Data analysis	Project documents updates
	Procurement documentation	Interpersonal and team skills	
	Enterprise environmental factors	Prompt lists	
	Organizational process assets	Meetings	

11.3	Perform Qualitative Risk Analysis		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Project documents updates
	Project documents	Data gathering	
	Enterprise environmental factors	Data analysis	
	Organizational process assets	Interpersonal and team skills	
		Risk categorization	
		Data representation	
		Meetings	

11.4	Perform Qualitative Risk Analysis		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Project documents updates
	Project documents	Data gathering	
	Enterprise environmental factors	Interpersonal and team skills	
	Organizational process assets	Representations of uncertainty	
		Data analysis	

11.5	Plan Risk Responses		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Change requests
	Project documents	Data gathering	Project management plan updates
	Enterprise environmental factors	Interpersonal and team skills	Project documents updates
	Organizational process assets	Strategies for threats	
		Strategies for opportunities	
		Contingent response strategies	
		Strategies for overall project risk	
		Data analysis	
		Decision making	

11.6	Implement Risk Responses		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Change requests
	Project documents	Interpersonal and team skills	Project documents updates
	Organizational process assets	Project management information system	

11.7	Monitor Risks		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Data analysis	Work performance information
	Project documents	Audits	Change requests
	Work performance data	Meetings	Project management plan updates
	Work performance reports		Project documents updates
			Organizational process assets updates

12.1	Plan Procurement Management		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Procurements management plan
	Business documents	Data gathering	Procurement strategy
	Project management plan	Data analysis	Bid documents
	Project documents	Source selection analysis	Procurement statement of work
	Enterprise environmental factors	Meetings	Source selection criteria
	Organizational process assets		Make-or-buy decisions
			Independent cost estimates
			Change requests
			Project documents updates
			Organizational process assets updates

12.2	Conduct Procurements		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Selected sellers
	Project documents	Advertising	Agreements
	Procurement documentation	Bidder conferences	Change requests
	Seller proposals	Data analysis	Project management plan updates
	Enterprise environmental factors	Interpersonal and team skills	Project documents updates
	Organizational process assets		Organizational process assets updates

12.3	Control Procurements		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Closed procurements
	Project documents	Claims administration	Work performance information
	Agreements	Data analysis	Procurement documentation updates
	Procurement documentation	Inspection	Change requests
	Approved change requests	Audits	Project management plan updates
	Work performance data		Project documents updates
	Enterprise environmental factors		Organizational process assets updates
	Organizational process assets		

13.1	Identify Stakeholders		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Stakeholder register
	Business documents	Data gathering	Change requests
	Project management plan	Data analysis	Project management plan updates
	Project documents	Data representation	Project documents updates
	Agreements	Meetings	
	Enterprise environmental factors		
	Organizational process assets		

13.2	Plan Stakeholder Engagement		
	Inputs	**Tools & Techniques**	**Outputs**
	Project Charter	Expert judgment	Stakeholder engagement plan
	Project management plan	Data gathering	
	Project documents	Data analysis	
	Agreements	Decision making	
	Enterprise environmental factors	Data representation	
	Organizational process assets	Meetings	

13.3	Manage Stakeholder Engagement		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Expert judgment	Change requests
	Project documents	Communication skills	Project management plan updates
	Enterprise environmental factors	Interpersonal and team skills	Project documents updates
	Organizational process assets	Ground rules	
		Meetings	

13.4	Monitor Stakeholder Engagement		
	Inputs	**Tools & Techniques**	**Outputs**
	Project management plan	Data analysis	Work performance information
	Project documents	Decision making	Change requests
	Work Performance data	Data representation	Project management plan updates
	Enterprise environmental factors	Communication skills	Project documents updates
	Organizational process assets	Interpersonal and team skills	
		Meetings	