Cairo University
Faculty of Graduate Studies for Statistical Research

EASY INVOICING APPLICATION "EIA" Project Skills

Prepared by 130 Group

Ahmed Gamal Sallam – 202201314

Kahlawy Saber Fathy – 202201347

Waled Ibrahim Mohey Eldin – 202202040

Ahmed Gomaa Shazly – 202201069

Mohamed Mohamed Selim - 202201271

Source Code URL :

https://github.com/kahlawy/EasyInvoice

All Project Documentation:

https://github.com/kahlawy/EasyInvoice/tree/master/netcore/SE_SWPM_Group_130

Project Skills questions which implemented on the easy invoicing application:

Break down phases into tasks. How?	
Identify the phases:	Start by clearly defining the major phases or stages of your project. These phases should represent distinct milestones or objectives that need to be achieved.
Define the deliverables:	For each phase, determine the key deliverables or outcomes that need to be produced. These deliverables should be tangible and measurable.
Break down the deliverables:	Take each deliverable and break it down into smaller, manageable tasks. These tasks should be specific, actionable, and represent individual steps towards completing the deliverable.
Establish dependencies:	Identify any dependencies between tasks or phases. Determine which tasks need to be completed before others can begin. This will help you sequence the tasks properly.
Prioritize tasks:	Assess the priority and importance of each task. Consider factors such as deadlines, dependencies, and critical path analysis. Prioritize the tasks based on these factors to ensure a smooth flow of work.
Estimate task durations:	Estimate the time required to complete each task. This will help you allocate resources, schedule activities, and manage expectations.
Assign responsibilities:	Determine who will be responsible for each task. Assign tasks to team members based on their skills, expertise, and availability. Clearly communicate the assignments to ensure accountability.
Create a task schedule:	Once you have defined the tasks, dependencies, priorities, durations, and assignments, create a detailed task schedule or project timeline. This schedule should outline the start and end dates for each task, as well as any milestones or checkpoints.
Monitor and track progress:	Continuously monitor the progress of tasks and phases. Update the schedule as needed, track actual progress against planned timelines, and make adjustments if necessary.
Review and iterate:	Regularly review the task breakdown and adjust it as the project progresses. Tasks may need to be added, modified, or removed based on changing requirements or circumstances.

Consult with your team to determine a viable timescale How?

Gather input from team members:	Schedule a meeting or workshop with your project team to discuss the project scope, objectives, and requirements. Encourage team members to share their insights, concerns, and any potential challenges they foresee in achieving the project goals.
Identify task dependencies:	Review the breakdown of tasks and their dependencies. Discuss with the team any tasks that are interrelated or dependent on each other. This will help identify any critical paths or tasks that may impact the overall timeline.
Estimate task durations:	Ask team members to estimate the time required to complete each task based on their expertise and experience. Consider factors such as complexity, resources available, and any potential risks or uncertainties that could affect task duration.
Discuss resource availability:	Evaluate the availability of team members and other necessary resources for the project. Determine if there are any constraints or limitations that could impact the timeline. Consider factors such as team members' workload, vacations, and other commitments.
Consider external factors:	Take into account any external factors that may influence the project timeline. This could include dependencies on third parties, regulatory approvals, or external events that may impact project progress.
Analyze and synthesize the information:	Analyze the input from team members, task durations, resource availability, and external factors. Look for any gaps, conflicts, or areas of concern. Consider trade-offs and potential adjustments that may be necessary to achieve a realistic timescale.
Facilitate a discussion:	Engage the team in a discussion to align expectations and make decisions about the project timeline. Encourage open communication and collaboration to reach a consensus on the most viable timescale.
Document the agreed-upon timescale:	Once the team has reached a consensus on the timescale, document it clearly in the project plan or timeline. Ensure that everyone involved has access to the updated information.
Monitor and adjust:	Regularly monitor the progress of the project and track it against the established timescale. If any deviations or challenges arise,

	work with the team to assess the impact and make necessary adjustments to keep the project on track.

Define baselines and milestones?

Defining baselines and milestones is an essential part of project management. Baselines provide a reference point for measuring project performance, while milestones mark significant achievements or events. By defining baselines and milestones, you establish a framework for measuring project progress, managing expectations, and ensuring that the project stays on track. Regularly review and update the baselines and milestones as the project progresses to reflect any changes in scope, schedule, or other project variables. Here's how you can define baselines and milestones in a project:

Baselines		Milestones:	
Scope Baseline:	Define the scope baseline by clearly identifying the project's deliverables, objectives, and boundaries. This includes the project scope statement, requirements documentation, and any other relevant scope-related documents.	**Identify Significant Events:**	Determine the key events or achievements that mark important milestones in the project. These can be major deliverables, completion of critical tasks, key decision points, or any other significant project milestones.
Schedule Baseline:	Establish the schedule baseline by determining the start and end dates of the project, as well as key milestones and deadlines. This includes a detailed project schedule or timeline that outlines the sequence of tasks, their durations, and dependencies.	**Define Milestone Criteria:**	Clearly define the criteria that need to be met to consider a milestone achieved. This could include specific deliverables being completed, reaching a certain stage in the project, obtaining approvals, or achieving a predetermined performance target.
Cost Baseline:	Define the cost baseline by determining the budget for the project. This includes estimating the	**Milestone Timeline:**	Incorporate the milestones into the project schedule or timeline. Assign

	costs of resources, materials, and any other project-related expenses. It provides a reference point for monitoring and controlling project costs.		specific dates or timeframes to each milestone to indicate when they are expected to be achieved.
Quality Baseline:	Establish the quality baseline by defining the quality standards, metrics, and criteria that will be used to evaluate the project's deliverables. This includes any quality management plans, test plans, or quality assurance processes.	**Communicate Milestones:**	Share the milestone timeline with the project team and other stakeholders. Ensure that everyone is aware of the key milestones and their significance in the project's progress.
Baseline Approval:	Once the baselines are defined, seek approval from relevant stakeholders, such as project sponsors or clients. This ensures that the project's objectives, scope, schedule, cost, and quality expectations are aligned and agreed upon.	**Monitor Milestone Progress:**	Regularly track and monitor the progress of the project against the milestone timeline. This helps to assess if the project is on track and allows for timely adjustments or interventions if milestones are at risk of not being achieved. f. Celebrate Milestone Achievements: Recognize and celebrate the successful completion of milestones to boost morale and motivation within the project team. This helps to maintain a positive project culture and encourages continued progress towards subsequent milestones.

Write a communication plan How?

The communication plan should be a dynamic document that evolves throughout the project. Regularly review and update it to adapt to changing stakeholder needs, project progress, and emerging communication technologies or trends.

Objectives:	Define the communication objectives: Specify the primary goals of the communication plan, such as ensuring timely and accurate information flow, fostering collaboration, and maintaining stakeholder engagement.
Stakeholder Analysis:	Identify key stakeholders: Determine the individuals, groups, or organizations that have an interest or influence in the project. Categorize stakeholders based on their level of involvement and impact on the project.
Communication Methods:	Choose appropriate communication methods: Determine the most effective communication channels based on the project's needs and stakeholder preferences. This can include:

Meetings and Workshops:	Schedule regular team meetings, progress reviews, and workshops for information sharing and decision-making.
Email and Memos:	Use email or formal written communications to distribute important updates, announcements, or reports.
Project Management Tools:	Utilize project management software or collaboration platforms to facilitate communication, document sharing, and task tracking.
Presentations and Reports:	Create presentations or reports to communicate project status, key milestones, and outcomes to stakeholders.
Newsletters or Blog Posts:	Develop regular newsletters or blog posts to provide updates, share success stories, and promote project awareness.
In-person or Virtual Presentations:	Conduct presentations or town hall meetings to engage stakeholders directly and address their questions or concerns.
Social Media:	Leverage social media platforms to disseminate project information, engage with stakeholders, and generate public interest if applicable.

Communication Frequency and Timing:	Determine the frequency and timing of communication activities: Establish a communication schedule that defines when and how often different communication methods will be used. This ensures that stakeholders receive timely and relevant information.
Message Development:	Craft clear and concise messages: Develop key messages that convey important information in a simple and understandable manner. Tailor the messages to the needs and interests of different stakeholder groups.
Responsibilities:	Assign communication roles and responsibilities: Identify individuals or teams responsible for executing specific communication activities. Clearly define their roles and expectations to ensure accountability.
Feedback Mechanisms:	Establish feedback mechanisms: Create avenues for stakeholders to provide feedback, ask questions, or voice concerns. This can be through regular meetings, surveys, suggestion boxes, or dedicated communication channels.
Evaluation and Adjustments:	Monitor and evaluate communication effectiveness: Regularly assess the success of communication activities in achieving the desired objectives. Use feedback, engagement levels, and stakeholder satisfaction to make adjustments and improve the communication plan as needed.

Plan out your finishing process: How?

Review project objectives:	Ensure a clear understanding of the project objectives and deliverables that need to be achieved by the end.
Identify remaining tasks:	Assess the remaining tasks that need to be completed to finalize the project. This may include finalizing documentation, conducting final testing, performing quality assurance checks, and completing any outstanding activities.
Determine dependencies:	Identify any dependencies between tasks and ensure that the necessary prerequisites are completed before moving forward.
Allocate resources:	Assess the resources required to complete the finishing tasks and ensure they are available and assigned appropriately.
Develop a timeline:	Create a timeline or schedule for the finishing process, considering the estimated durations of each task and any dependencies or constraints.
Communicate expectations:	Clearly communicate the expectations and deadlines to the project team and stakeholders involved in the finishing process.
Execute and monitor:	Implement the finishing process according to the plan and monitor progress to ensure tasks are completed as scheduled.
Review and revise:	Regularly review the progress of the finishing tasks and make adjustments to the plan as needed. Address any issues or obstacles that arise.

Ensuring milestones, objectives, and deliverables are met and ready for approval. How?	
Milestone tracking:	Continuously track the progress of the project against the established milestones to ensure they are being met as planned. Regularly review the milestone timeline, assess the completion status of each milestone, and address any delays or deviations promptly.
Objective alignment:	Regularly review the project objectives and ensure that the project activities are aligned with them. Regularly communicate and reinforce the objectives to the team to maintain focus and ensure progress towards the desired outcomes.
Deliverable testing:	Develop a comprehensive testing plan for the project deliverables. Execute the testing activities to verify that the deliverables meet the defined requirements and quality standards. Conduct both functional and non-functional testing to ensure the deliverables are fit for purpose.
Stakeholder involvement:	Engage stakeholders throughout the project to gather their input, address their concerns, and obtain their feedback on the project deliverables. Involve them in the testing and review processes to ensure their requirements and expectations are met
Document and track approvals:	Establish a clear process for obtaining stakeholder approvals. Document the necessary approvals for each milestone and deliverable. Track the progress of approvals and ensure that all necessary sign-offs are obtained before final submission.

Evaluating a process running alongside project execution. How?	
Define evaluation criteria:	Establish specific criteria or metrics to assess the effectiveness and efficiency of the process. This may include factors such as resource utilization, time and cost savings, quality improvements, customer satisfaction, or any other relevant parameters.
Collect data:	Gather relevant data and information related to the process. This can be obtained through surveys, interviews, observations, process documentation, or performance metrics.
Analyze data:	Analyze the collected data to evaluate the process's performance. Identify strengths, weaknesses, bottlenecks, and areas for improvement. Look for patterns, trends, or anomalies that can provide insights into the process's effectiveness.
Identify improvement opportunities:	Based on the analysis, identify specific areas where the process can be enhanced or optimized. Prioritize the improvement opportunities based on their potential impact and feasibility.
Develop improvement strategies:	Propose strategies or actions to address the identified improvement opportunities. This can include process redesign, workflow modifications, automation, training, or any other relevant interventions.
Implement improvements:	Execute the proposed improvement strategies and monitor their impact on the process. Track the changes in performance metrics or other relevant indicators to assess the effectiveness of the implemented improvements.
Continuously monitor and adjust:	Establish a feedback loop to monitor the process's performance.