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1. a.) NUT Swim Team.

b.) 1. The Head Coach (project sponsor)-They do not manage the day to day operations of the project but they ensure the resources are in place, promote the project, and hold overall responsibility for the project's success.

2. Parent association (resource managers)-are responsible for assigning the right people to the right projects at the right time. They manage employees currently in the workplace and determine hiring needs based on each project's requirements.

3. Parents (Customers) – They pay for the users to enjoy the service of the product.

 4. Boys and Girls (customers/users) – These are the participant of the product services.

 5. Assistant Coaches (Resource managers) – Manage human resources.

 6. Graphics artist and Web Designers (Project team) – Participate in the execution ad completion of the project.

c. The project is a website for people interested in joining a local swim team. The target users are kids between ages 6 & 18. The team is split into sub-teams which hold team meets and are overseen by one of the 3 assistant coaches per meet. The website is to include the picture of these 3 assistant coaches and the information on the meets. An Association of Parents support the assistant coaches and there will be a schedule to show parent volunteer for the Association. The purpose of this project is to make work load easier in providing information for the children so at to avoid confusion.

d. Agile methodology is best suited for projects that are iterative and incremental. It’s a type of process where demands and solutions evolve through the collaborative effort of self-organizing and cross-functional teams and their customers.

e. Project Scope:

 A database to store information of boys and girls interested in joining the swim team. Details such as ‘Name, Height, Weight, ID, and Age’ will be included in the database.

 The website will use forms to allow for input of information of the interested individuals into the database.

 A database to store information on the parents who are members of the association, and forms which they use to sign up to the association.

To develop a content file management to effectively store, retrieve and display picture images.

 To provide administration capability to update the website with current information, relevant content and manager users.

 To develop a website that is search engine optimized to drive traffic to the website.

f. 1.) Home page: The website will provide a home page that is accessible to the public

2.) Swim meet page: The website will include a swim meet page that is accessible to the public

3.) Swim practice page: The website will provide a swim practice page that is accessible to the public

4.) Photo gallery: The website will include a photo gallery page that is accessible to the public.

The photo gallery will identify the names of swimmers and coaches in the photos.

5.) Coaching staff page: The website will provide a coaching staff page that is accessible to the public and provides a bio, photo and contact information for the coaching staff.

6.) User administrator: The website will provide a user administration capability that provides registered admins the ability to create, update and delete user ids.

7.) Content administration: The website will include a content administration capability that allows registered users to create, maintain and delete website content.

8.) System Requirements:

The website will be accessible over HTTP using modern web servers.

The website will be compatible with PC or Apple browsers.

The website will be hosted on a secure web server platform.

The system will provide sufficient security access controls to ensure any private information is stored securely on the hosted database servers.

The system will provide the capability to view and analyze website traffic and hits reports and metric.

g. Budget risk: Overrun of cost.

 Resource risk: Inability to secure sufficient resources such as skilled workers.

 Sponsor support: Related to responsibilities of the project sponsor.

 Schedule risk: Relating to schedules and scheduling.

 Security risk: Physical or information insecurity.

 Flat structure.

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 2a.) The application software package I mostly use is netbeans IDE.

 b.) Two or three times in a week

c.) For me, my most used is GUI builder

 While my least used is database system

d.) 5

e.) NetBeans IDE lets you quickly and easily develop Java desktop, mobile, and web applications, as well as HTML5 applications with HTML, JavaScript, and CSS. The IDE also provides a great set of tools for PHP and C/C++ developers. It provides different views of your data, from multiple project windows to helpful tools for setting up your applications and managing them efficiently, letting you drill down into your data quickly and easily, while giving you versioning tools via Subversion, Mercurial, and Git integration out of the box.

f.)Functionality.

 Reliability.

 Efficiency.

3) a.) Five factors that should be considered when allocating staff to a task:

1. Priority

Consider the work’s priority. Priority needs to drive everything. If you’ve been rigorous in your prioritization process, start at the top of the list and begin allocating work from there. That list should be based on the team’s and the organization’s goals. This has to be the first consideration in terms of how you distribute work. If a project is a top priority and somebody is available to do that work, they should be tasked with that work.

2. Skill Sets

Evaluate the skill set of the people who you’re thinking about distributing the work to. If they have the right skill set, you’re going to get a high quality result. The end product will be something that meets your customer’s needs. This also reduces the likelihood of people failing because you’re not giving them work that they don’t have the skill set to perform. You’re giving them something they can be successful with.

3. Availability

The next consideration for allocating work is a person’s availability. All things being equal in terms of priority and skill set, who is free to do the work? Who has the bandwidth? You should not be shifting resources from one project to another when you have available resources to pick up that new project.

If you start shifting resources around between projects when you have available resources elsewhere, you’re going to lose momentum on that first project and that project might fail. Additionally, the people who are on the project are going to be very frustrated. They had the resources they needed and all of a sudden they don’t. It’s going to seem like it was at a whim to just move somebody around. The person who will be most frustrated is the person who has the resource taken off the project they’re succeeding on and put onto something new.

4. Development

Next, you have to think about the development opportunity this project might present for that person. You should be constantly upgrading your team’s skill set. A way to do that is to give them new work where they’re going to learn new skills. Put them in situations where they’re going to be a little bit uncomfortable. Give them projects where they’re going to have to step up and learn, be taught, and be open to feedback and coaching. That’s how you’re going to take your team to the next level of performance.

5. Interest

The last consideration in terms of which person gets the work when it needs to be allocated is does somebody have an interest in performing that particular task? If someone is really interested and passionate about a project, you should let them take it on. They’re going to be motivated, excited to do it, and hopefully their performance will follow. One caveat here – make sure people don’t only gravitate to the work they enjoy doing and they stay away from things that they’re not comfortable with. If you let that happen, they’re going to end up getting pigeonholed and they’ll be very narrow in their focus.

b.) Some possible actions to be taken:

 Know what work is required:

Make sure that you have a clear brief before the project starts. You should understand what part of the bid was. You and the client should have a common understanding of what is included in the project. Confirm the scope with whoever needs to approve the work going ahead. This is the definitive list of everything that is expected on the project. Of course, that might change as work progresses, but your need to have a starting point from which to plan your work and the people who should be involved.

When you know what the scope of the project is, you can start to look at the resources required. Breakdown the work into the component parts. As you start to build out your project plan, you’ll need to draw on the subject matter experts from your team. They will help you identify the tasks to be done and give you an idea about the skills required to complete the tasks. When the project schedule comes together, you’ll have a clear view of what kind of person is required to deliver each of those activities, even if you don’t have exact names at this point.

Plan in advance:

It’s better to plan your resource needs in advance. There is too much risk involved with waiting until you need a particular resource and then trying to book them. That person might be already fully committed on another project, or on vacation or so on.

Confirm resource availability:

Perhaps someone is available to your project 50% of the time. What does that actually mean? Is it 50% of the full week? Or 50% of their time after a percentage has been sliced off for their admin and non-billable time? Or some other calculation? Check how much you can expect from resources – especially those who are only contributing to the project in a part-time capacity – before you book their time into your schedule.

Check their skills:

Do the people you want on the project still have up-to-date skills in the appropriate areas? Check your organization’s skills catalogue and make sure. It would be embarrassing to book a colleague on to a project and then find out that the last time he used those skills was on another project with you three years ago. Other people in the team might have got more relevant or updated skills, and they might be more appropriate for this client engagement.

If no one is available with the skills you need, it’s time to think about training. You may have people who could do the job with a bit of support. Can they be booked into training or coached before you need them for a particular task on the project? If so, add this activity to your project schedule so that they can book their time against their development and you can have confidence that it’s actually happening.

Remember to book equipment

We tend to focus on resources as being the human kind, but here are other types of resource that are important for projects. If you are working with a client in a consulting capacity, for example, you might not need any kit beyond your own personal computer. But if you are designing software for a client, you might need access to your company’s test lab or test equipment to make sure it’s fit for purpose before it goes to the client for user acceptance testing. Equipment is another kind of resource that you can book. Schedule what you need so that it is available for you when you need it.

c.) Steps needed to go through from identifying the need for a new resource right through to the end of the recruitment process:

1. Identify the hiring need

2. Devise a Recruitment Plan

3. Write a job description

4. Advertise the Position

5. Recruit the Position

6. Review Applications

7. Phone Interview/Initial Screening

8. Interviews

9. Applicant Assessment

10. Background Check

11. Decision

12. Reference Check

13. Job offer

14. Hiring

15. Onboarding

4. Yes I agree because if things don’t go to plan, it can lead to project failure. With agile project management, there is more flexibility with regards to incorporating changes and modifications at any stage, and this promotes better delivery of the project results.And there is more control of the project, in that you can dictate the deliverables, and change strategies when they are not working, and this promotes more management of the outcomes, which is not so effective with structured methods.

5a. A stakeholder refers to an individual, group, or organization, who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project.

b) i) Consumers, employees, investors, suppliers.

 ii) Consumers: Product/service quality and value

 Employees: Employment income and safety

 Investors: Financial returns

 Suppliers: Revenues and safety

c) Project manager, project team, business analyst.

6) a.) Project management infrastructure that would be needed to support a software development consulting team working at a client site:

1. Software Development Life Cycle (SDLC) is a process used by the software industry to design, develop and test high quality softwares. The SDLC aims to produce a high-quality software that meets or exceeds customer expectations, reaches completion within times and cost estimates. SDLC is a process followed for a software project, within a software organization. It consists of a detailed plan describing how to develop, maintain, replace and alter or enhance specific software. The life cycle defines a methodology for improving the quality of software and the overall development process.

A typical Software Development Life Cycle consists of the following stages −

Stage 1: Planning and Requirement Analysis

Requirement analysis is the most important and fundamental stage in SDLC. It is performed by the senior members of the team with inputs from the customer, the sales department, market surveys and domain experts in the industry. This information is then used to plan the basic project approach and to conduct product feasibility study in the economical, operational and technical areas.

Planning for the quality assurance requirements and identification of the risks associated with the project is also done in the planning stage. The outcome of the technical feasibility study is to define the various technical approaches that can be followed to implement the project successfully with minimum risks.

Stage 2: Defining Requirements

Once the requirement analysis is done the next step is to clearly define and document the product requirements and get them approved from the customer or the market analysts. This is done through an SRS (Software Requirement Specification) document which consists of all the product requirements to be designed and developed during the project life cycle.

Stage 3: Designing the Product Architecture

SRS is the reference for product architects to come out with the best architecture for the product to be developed. Based on the requirements specified in SRS, usually more than one design approach for the product architecture is proposed and documented in a DDS - Design Document Specification.

This DDS is reviewed by all the important stakeholders and based on various parameters as risk assessment, product robustness, design modularity, budget and time constraints, the best design approach is selected for the product.

A design approach clearly defines all the architectural modules of the product along with its communication and data flow representation with the external and third party modules (if any). The internal design of all the modules of the proposed architecture should be clearly defined with the minutest of the details in DDS.

Stage 4: Building or Developing the Product

In this stage of SDLC the actual development starts and the product is built. The programming code is generated as per DDS during this stage. If the design is performed in a detailed and organized manner, code generation can be accomplished without much hassle.

Developers must follow the coding guidelines defined by their organization and programming tools like compilers, interpreters, debuggers, etc. are used to generate the code. Different high level programming languages such as C, C++, Pascal, Java and PHP are used for coding. The programming language is chosen with respect to the type of software being developed.

Stage 5: Testing the Product

This stage is usually a subset of all the stages as in the modern SDLC models, the testing activities are mostly involved in all the stages of SDLC. However, this stage refers to the testing only stage of the product where product defects are reported, tracked, fixed and retested, until the product reaches the quality standards defined in the SRS.

Stage 6: Deployment in the Market and Maintenance

Once the product is tested and ready to be deployed it is released formally in the appropriate market. Sometimes product deployment happens in stages as per the business strategy of that organization. The product may first be released in a limited segment and tested in the real business environment (UAT- User acceptance testing).

Then based on the feedback, the product may be released as it is or with suggested enhancements in the targeting market segment. After the product is released in the market, its maintenance is done for the existing customer base.

b.) How project teams should work in a massive IT through the concept of learning cycles:

1.) Initiation Phase:

During the first of these phases, the initiation phase, the project objective or need is identified; this can be a business problem or opportunity. An appropriate response to the need is documented in a business case with recommended solution options. A feasibility study is conducted to investigate whether each option addresses the project objective and a final recommended solution is determined. Issues of feasibility (“can we do the project?”) and justification (“should we do the project?”) are addressed.

2.) Planning Phase:

The next phase, the planning phase, is where the project solution is further developed in as much detail as possible and the steps necessary to meet the project’s objective are planned. In this step, the team identifies all of the work to be done. The project’s tasks and resource requirements are identified, along with the strategy for producing them. This is also referred to as “scope management.” A project plan is created outlining the activities, tasks, dependencies, and timeframes. The project manager coordinates the preparation of a project budget by providing cost estimates for the labour, equipment, and materials costs. The budget is used to monitor and control cost expenditures during project implementation.

3.) Implementation (Execution) Phase:

During the third phase, the implementation phase, the project plan is put into motion and the work of the project is performed. It is important to maintain control and communicate as needed during implementation. Progress is continuously monitored and appropriate adjustments are made and recorded as variances from the original plan. In any project, a project manager spends most of the time in this step. During project implementation, people are carrying out the tasks, and progress information is being reported through regular team meetings. The project manager uses this information to maintain control over the direction of the project by comparing the progress reports with the project plan to measure the performance of the project activities and take corrective action as needed. The first course of action should always be to bring the project back on course (i.e., to return it to the original plan). If that cannot happen, the team should record variations from the original plan and record and publish modifications to the plan. Throughout this step, project sponsors and other key stakeholders should be kept informed of the project’s status according to the agreed-on frequency and format of communication. The plan should be updated and published on a regular basis.

4.) Closing Phase

 During the final closure, or completion phase, the emphasis is on releasing the final deliverables to the customer, handing over project documentation to the business, terminating supplier contracts, releasing project resources, and communicating the closure of the project to all stakeholders. The last remaining step is to conduct lessons-learned studies to examine what went well and what didn’t. Through this type of analysis, the wisdom of experience is transferred back to the project organization, which will help future project teams.

c.) How Project Life Cycle (PLC) relates to Software Development Life Cycle (SDLC):

The project life cycle (PLC) focuses on the phases, processes, tools, knowledge and skills of managing a project, while the system development life cycle (SDLC) focuses on creating and implementing the project’s product – the information system. How a project team chooses to implement the SDLC will directly affect how the project is planned in terms of phases, tasks, estimates and resources assigned. The SDLC is really part of the PLC because many of the activities for developing the information system occur during the execution phase. The last two stages of the PLC, closing and evaluating the project, occur after the implementation of the information system. The integration of project management and system development activities is one important component that distinguishes IT projects from other types of projects.