THE ART OF TECHNICAL PROJECT MANAGEMENT

KEN WHITAKER

A Master Class for Leading Technical Projects

The Art of Technical Project Management

by Ken Whitaker
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www.ArtofTechPM.com

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Colophon

This course was created using software from Adobe, Autodesk, Microsoft, Techsmith, and The Omni Group.
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Professional Leadership Training by

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ABOUT US

Ken Whitaker, of Leading Software Maniacs (LSM), has more than twenty-five years of software development executive leadership and training experience in a variety of technology roles and industries. Ken has written books on leadership and graphics/publishing. He is a recognized innovator in instructional design and workshops primarily on agile project management and execution.

Ken Whitaker, managing director of Leading Software Maniacs (LSM), has written books on leadership and is an innovator in instructional design and agile project leadership workshops. Ken is the creator of PM Chalkboard™, http://www.pmchalkboard.com, that has been recommended by two international colleges for students taking project managment courses.

These video shorts highlight some of the basics of project management. To stand out from other boring videos, we included all sorts of obnoxious animations, visual effects, and sounds (noises).

A lot of folks can't stand all of that stuff. But then again: some of the videos have over 100K views! Go figure.

Ken was most recently the editor for *Better Software* magazine, http://www.stickyminds.com/better-software-magazine, magazine. He is creating a suite of Spresso productivity apps, http://www.spressoapps.com, for creative professionals and the unique The Nerd Herd Game gamification product, http://www.nerdherdgame.com. com, that redefines learning. This app-based game will be offered as an accessory to.

For students, we appreciate you using this book to learn project management fundamentals. For those being retrained for jobs in the techie sector, this book should serve as an introduction to the wonderful world of project management. It might be interesting to know that before this course was aimed at those being retrained for techie jobs, the title was *Young Person's Guide to Software Project Management*. For instructors, use the *Instructor Guide* edition of this book to help you work with those unruly classes. This textbook includes links to videos and downloads for self-study (homework).

He can be reached at http://www.leadingswmaniacs.com.

DEDICATION

For my wonderful partner and wife, Gina, who makes me a better,
more giving person.

(In fact, it happens to *everyone* she meets.)

TABLE OF CONTENTS

INTRODUCTION

Even if you want to skip this section, DON'T! Read this section before using the book. You'll be glad you did. (Serious.)

The Art of Technical Project Management (ArtofTechPM) is organized into three sections: planning, process, and people. This is a book that can be used outside of the course but it is also a textbook and a workbook. It is the core material for a course on project management. In all of my years leading technology teams I learned one key rule of thumb the hard way. Project managers need to balance activities between each of these three categories. To build successful products you need to master the fundamentals of planning, process, and people. I call this the *4Ps*.

Each section consists of specific topics, each with a focus and learning objectives.

Although you might want to jump to only those topics that interest you, I'd suggest learning them in order. Often given the least attention, we attack critical planning topics first. Since project managers tend to consume process-related stuff, we cover the process category second. And because project teams rely on staff to get things done, we save people topics for last.

There is a cost to an organization when these three categories (planning, process, and people) are out of balance.

For organizations focused on planning activities, they run the risk of lack of attention to the tactics of project delivery. A planning organization spends time on strategy and on what it is *going* to do—not what it *should* be doing.

It has been my experience that project managers can't help but gravitate to process methods and mechanisms. Process-oriented organizations believe that following a process guarantees results. Unfortunately, strict adherence to process flies in the face of everyday project dynamics.

And when the primary focus is on people-related activities, there is often a lack of holding staff to high standards. An over emphasis on people and maintaining a certain culture can be frustrating to upper management. They may feel like the company is being held hostage.

Although ArtofTechPM targets young technie hopefuls, don't let the title confuse you. This book is useful for those, of *any* age—especially those being retrained for a career in project management. I am particularly excited about young women attending coding camps who also want to become "killer" project managers.

ArtofTechPM material combines this textbook with videos and downloadable documents. Although you can "go it alone" with self study, you'll benefit more from instructor-led classroom interaction. Although a live classroom can be an amazing environment for learning, scheduled online web classroom works great, too. This course is designed to be taught in a typical semester class (a subset can fit into
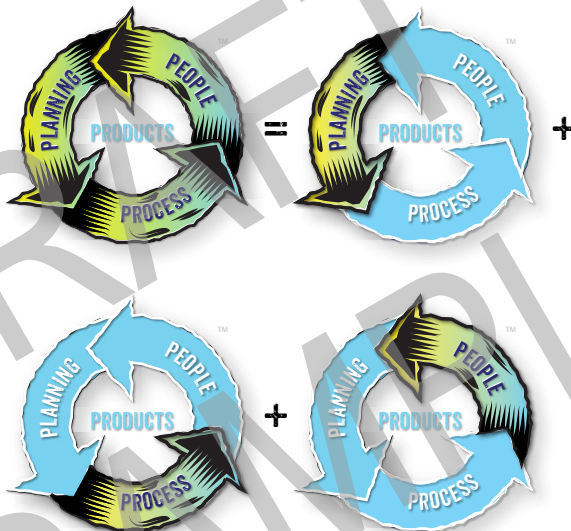
a quarter curriculum). Although this bnook can be used as a textbook, in blended learning environments, this is treated as a **workbook** to learn and perform exercises with. The workbook is divided into three **sections** (modules) with a series of **lessons** (chapters) under each. The first section includes planning lessons, the second section is all about processs, and the third is people-related.

Lessons are presented using the same set of conventions throughout the book. Each lesson is designed to be taught in a single one-hour class. Using "Measuring Individual Performance" (topic 31) as an example, learning objectives are stated up front:

> In the previous lesson, you learned about the basics of organizational behavioral theories. The next step is to address individual performance measurement. Addressing performance can be stressful for both the project manager and the team member. To the project manager, performance management is something they'd rather avoid. Like school teachers giving each student a final letter grade, evaluating a team member's performance can be no fun at all. Team members become anxious over the prospect of receiving performance evaluations. Yikes! The evaluation can influence pay, assigned tasks, and even ongoing employment.
>
> In this lesson, we'll identify an effective way to address performance appraisals that benefit the project manager and the team member.

For homework, students are encouraged to read the lesson's chapter content. In addition, there is a "Self-Study" box located near the end of the chapter:

SELF-STUDY

For homework, view the video lesson and take the quiz at https://www.screencast.com/t/7PxGcMs0nrgy.

Download the topic's attachments from the video page by clicking the

Self-study provides the URL to access additional online information for video viewing and to access templates and homework assignments. Since all of the lesson topics are maintained on this *The Art of Technical Project Management* web site, every student should set up a no-cost (meaning "free") login account. This web page lets you do two things shown in the figure to the right:

1 Click or tap the play button to view the video summarizing the lesson. Most videos include a short quiz to make sure you paid attention. Most topic videos range between three and seven minutes. The quiz usually has two to four questions.

2 Click on the Details button at the top to download lesson attachments (documents, spreadsheets, and so on):
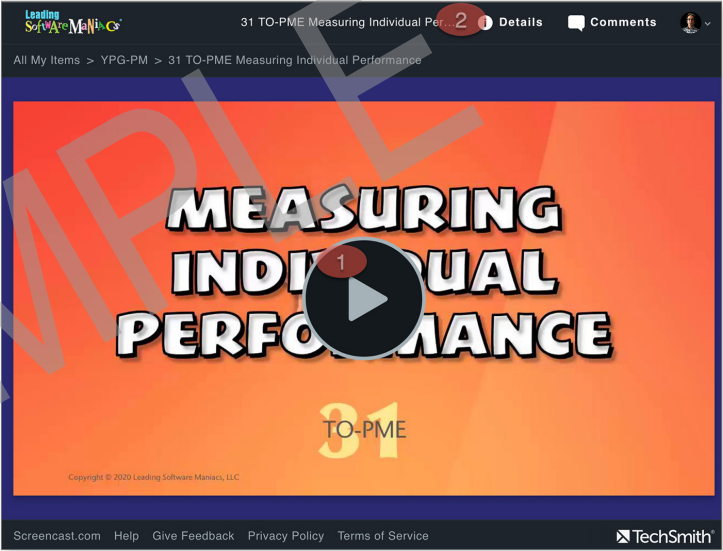
To access attachments, click (or tap) the down-arrow icon to download the *ZIP* package (the "1" marker in the figure below) to your system:
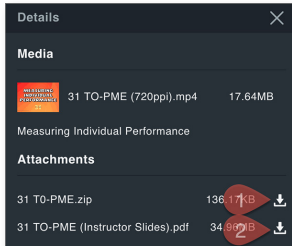
Topic attachments often serve as templates for classroom exercises. A corresponding slideshow (the "2" marker in the figure above) can be used by the instructor in class. The slides are in PDF format. Students are free to use these attachments without licensing restrictions.

The first heading is called "Instruction." As the name implies, the material is the lecture material consisting of text, tables, and figures:

Everything in the "Instruction" section should be digested, discovered, and discussed in class.

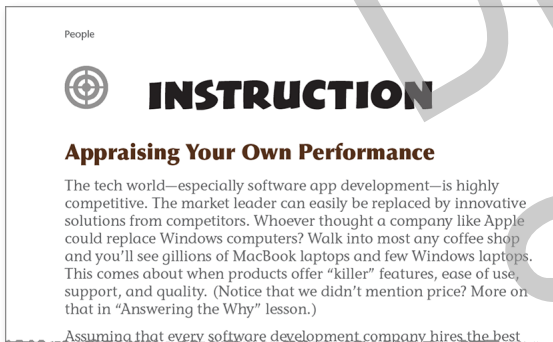To further enhance student's ability to grasp project management concepts, some topics include references to video clips. The URL can be clicked or tapped to view the video in a browser next to this symbol:

After the movie clip is viewed in class, students should discuss it.

The next part is "Case Studies" where sample situations supporting the topic are presented. Case studies are great ways to associate learning material with actual, real-life situations.
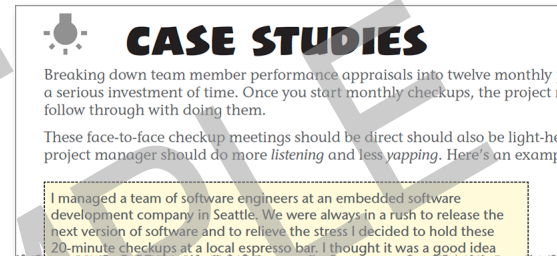
Case studies take on a life of their own when students share their own experiences, too.

To view the video, click on the link (starting with the URL: https://www.screencast.com) and enter in the super secret access two words: Nerd Herd. This password is used to access every online topic's video and you may want to consider setting up a no-cost login to TechSmith Screencast. You can (1) click the play icon to view the video and (2) click Details The next section is the "Team Exercise."

Using what you learned so far (in combination with the downloaded attachments), the class should subdivide into small teams to perform one or more activities.

TEAM EXERCISE

Divide the class into teams of no more than four team members each. Select one team member to be the project manager, one as the team member, and the other two as observers. (For web classes, select only four students for these roles.) Identify a project that is being performed in another class--like a computer science programming assignment.

The team exercise has two benefits:

1   Collaborating with others
2   Learning by doing

To make sure that students understand the topic, the "T-Y-K" (test your knowledge) gives everyone the chance to answer questions.

T-Y-K

(Test Your Knowledge)

1   In the monthly performance checkup between the project manager and the team member, which one is false?

   A   Monthly priorities should support and align with an organization's needs identified under the "Goals" heading.

   B   A must have priority is a necessary requirement to be

An open question and answer session is a great way to encourage lively discussion on material they just learned. By the way, these questions are more detailed than those in the self-study video.

Finally, "References" provides a list of books, videos, and other articles students can refer to for more information:

REFERENCES

1   Nelson, Bob and Peter Economy. *Managing for Dummies. 3rd Edition.* Hoboken, NJ: Wiley Publishing, Inc., 2010.

Although ArtofTechPM is all about *project management*, I hope you'll find this course helpful to provide a solid foundation about leadership. I know of no other book (or course) that is designed for those being retrained for a career in tech project management and young adults. To be efffective, the writing style is fashioned from the art of storytelling with plenty of graphic visuals. Rather than boring, complicated project management theories, this course is presented as short, highly-focused topics.

Have fun!

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DRAFT
SAMPLE

MEASURING INDIVIDUAL PERFORMANCE

31

In the previous lesson, you learned about the basics of organizational behavioral theories. The next step is to address individual performance measurement. Addressing performance can be stressful for both the project manager and the team member. To the project manager, performance management is something they'd rather avoid. Like school teachers giving each student a final letter grade, evaluating a team member's performance can be no fun at all. Team members become anxious over the prospect of receiving performance evaluations. Yikes! The evaluation can influence pay, assigned tasks, and even ongoing employment. In this lesson, we'll identify an effective way to address performance appraisals that benefit the project manager and the team member.

📋 INSTRUCTION

APPRAISING YOUR OWN PERFORMANCE

The tech world—especially software app development—is highly competitive. Any market leader can easily be replaced by innovative solutions from competitors. As a recent example, who would have thought a company like Apple could replace Windows computers? Walk into most coffee shops and you'll see MacBook laptops and very few Windows laptops. This comes about when products offer "killer" features, ease of use, support, and quality. (Then what about price? More on that in "Mission, Vision, and the Why" on page <?>.)

Assuming that every software development company hires the best software engineers, what makes one company's team outperform another? How can one company out-innovate others? It comes down to how team members are managed throughout the lifecycle of projects. For a project to succeed, every team member on a project team must perform at full potential. That's where project management comes in.

It is up to a project manager to make sure that every team member is setup to perform project-related tasks. Consider your latest job and honestly answer seven questions in a checklist (available as a downloadable spreadsheet). Filling this out is easy and should only take a couple of minutes (see Figure 31-1).

1 Answer Yes or No for each of the eight checklist questions. Answer truthfully with either a Yes or a No. (There is no Maybe response.)

2 This part of the spreadsheet summarizes your answers.

3 An analysis of how you fared when all of the questions are answered.

Figure 31-1 *Filling out My Performance Checklist spreadsheet*

If you only have one or two items with Yes answers, the project manager and the team member are not communicating performance expectations at all:

Figure 31-2 *A possible disconnect between a team member and project manager*

If you answered about half of them with a Yes, performance expectations are probably not clear to you at all. Unfortunately, this assumes that you and your project manager are not aligned. If you

answered most of them (six or seven) with a Yes, then congratulations! That means there is a very strong communication link and expectations are clear between the two of you.

It comes down to this:

> "Each team member should have a clear focus on their work and how they are performing. Individual performance contributes to the overall performance and success of the team."

GIVING PERFORMANCE FEEDBACK

Most of us view performance feedback as a company "given"—it must be in some rule book somewhere. What you may not realize is that it plays an important part in team member motivation.

According to Bob Nelson and Peter Economy in *Managing for Dummies*, [1] there are four key reasons why performance appraisals are necessary for employee motivation and retention:

- Chance to summarize past performance and establish new performance objectives.
- Opportunity for two-way, meaningful communication.
- Forum for career planning and development.
- Maintains a formal documentation of a person's performance.

We've all experienced situations where we've worked hard on a group assignment while others somehow "skate by" without doing their fair share. They may even get the same accolades or letter grade as you.

As a project manager, handling a team member's poor performance can be difficult. If you go to your human resources (HR) department for assistance, they will ask you for a documented history of performance issues. Without documented backup, you won't be able to place the team member on a performance improvement plan (PIP). And without attempting to correct poor performance, you cannot remove the individual from the team. Everybody deserves a chance.

Every company has its own performance feedback requirements to follow. Consider these time-proven rules of thumb:

- Never wait until the mandatory performance review process to prepare annual performance appraisals. Work on it along the way.
- You can ask   team members to write self-appraisals   until you are "blue in the face." Not only do most technologists resist "tooting their own horn," they rarely have time. Make a self-assessment optional.
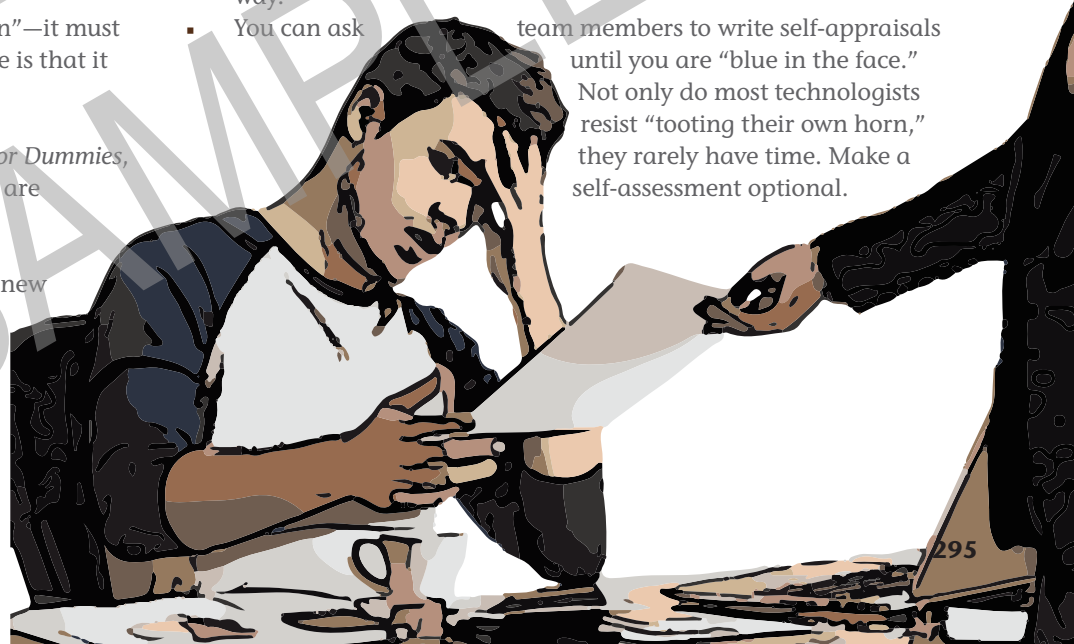
WHAT IS A PERFORMANCE IMPROVEMENT PLAN ANYWAY?

When a team member is not performing, the project manager needs to present a fair, documented history of issues to the team member. The two will then agree on specific actions to improve performance along with expected behavior on an agreed-upon timeline. It is expected that the two will meet frequently to ensure that the team member is getting the appropriate guidance. Overall, you want the team member to succeed.

If the tasks are successfully completed, the project manager eliminates the PIP and life goes on. Otherwise, further disciplinary action takes place, possibly leading to termination of employment.

Two important things to consider:

- This situation must be confidential, the rest of the project team doesn't need to know.

- Always work with the HR department to make sure that company procedures are being followed.

Pretty straightforward. Don't forget, performance managemebnt can be motivating to the manager and to the staff member.

THE 20-MINUTE PERFORMANCE CHECKUP

An efficient way to manage performance communication activities is to adopt an agile approach. Agile implies frequent communication focused on interim checkups of the most-important work activities. And each face-to-face performance checkup shouldn't take more than twenty minutes. For a six-team member team, the project manager can

schedule interim checkups over a two-hour period of time.

How often each checkup should take place depends on your project activities. It should not be too frequent (weekly may be too often) and yet not too infrequent (quarterly, every three months, tends to be way too long). Monthly performance checkups seem to work quite well for most organizations.

What's even better is that a single performance checkup can fit on a single page of paper. A sample checkup (*Monthly Performance Checkup - Example.docx*) is available for download as a Word document. The first part of the document sets the tone with (1) department goal and (2) the team member's career path:

Goal 1

The overall product development goal for the year is:

1. All products are released on schedule with a focus on quality.
2. Adopt our agile software development process that requires your participation with rapid cycles of planning, programming, unit testing, and re-assessment.
3. Migrate from a C++ programming language code base to platform-independent, object-oriented Xojo.

Career Path 2

To advance from associate software engineer to software engineer, keep these in mind:

- Establish a track record for on-time delivery of quality products on agreed-upon schedule.
- Demonstrate collaboration skills with team members to meet or exceed goals (above).
- Show the initiative to take on additional tasks proactively.

Figure 31-3 *Identifying the goal and career path in a performance checkup*

The project manager discusses the following with the team member:

1 Each task is evaluated by the project manager.
2 An overall assessment is given (ME or meets expectation).

The performance scores (shown above) used for each task are typical for technie organizations used in annual reviews. Outstanding (OU) is similar to a grade A, exceeds expectations (EE) to a grade B, and so on. There is one big difference. A meets expectation (ME) result should never be regarded as mediocre or average performance. Meeting expectations implies that the team member is performing exactly as expected. And that is a very good score!

ADDING COMMENTS TO THE CHECKUP

It is a good idea to include comments that identify what you can do to help the employee succeed during the next review period. Without this detail, checkups can be pretty boring and uneventful. Meaningful annotations can motivate the team member to want to improve their score next time.

Prioritize and document the tasks for the next review period:

May 2020 Checkup

#	Goal	How to measure?	Result*
1	Complete coding and unit testing of the export module for app X. Take original C++ code and convert to Xojo.	Expected to take no more than two two-week sprints.	
2	Help the team to respond to correct any functional bugs as found by QA.	No uncorrected priority level 1 or 2 bugs can drag over multiple sprints.	
3	Avoid reinventing the wheel (see Apr 2020 comments)	Demonstrate to the team what built-in Xojo library functions can be used	
4	Adopt the new tools—especially Doxgen and helping QA define the build scripting engines.	Embed technical documentation as comments complying with Doxygen syntax rules	
5	Assist in the interview process for engineering intern	Hire candidate by Jul 2020.	

*   **OU**=Outstanding, **EE**=Exceeds expectations, **ME**=Meets expectations, **NI**=Needs Improvement, **UN**= Unacceptable

Figure 31-4 *An example of goals for the next performance checkup*

Don't forget to make a copy for the team member. A single document for each team member becomes a history of performance checkups for the year.

What about requiring status reports?

Many organizations in the tech world ask that team members submit weekly status reports. And if those work for you, by all means—status away! However, more modern tech organizations strive to be very lean. Being lean generally assumes two things:

- Anything that slows down progress to perform the actual work should not be performed.
- If bureaucratic stuff like filling out status reports aren't really read

or acted upon, don't bother doing them.

Besides, regular performance checkups provide a more interactive and collaborative way to report status.

What does all of this mean?

Reviews can't be just word of mouth—they must be documented. Frequent twenty-minute performance checkups offer five key benefits:

- Project risk is reduced.
- Regular communication with the person in charge takes place (most techies try to avoid face-to-face interactions).
- If the team member falls behind and doesn't perform to expectations, the project manager can jump in and help improve the situation quickly.
- At the end of the year, the team member and the project manager have a monthly history of performance results. This makes the annual performance appraisal a breeze to fill out.
- There are no surprises of what work is to be performed instead of hide in obscurity for months.

One additional thing to keep in mind. Most businesses these days have to be quick on their feet requiring an immediate adjustment to prioritized tasks. If that does occur, the project manager should meet with the impacted team members and renegotiate the work for the remainder of the month.

💡 CASE STUDIES

Breaking down team member performance appraisals into twelve monthly performance checkups can be a serious investment of time. Once you start monthly checkups, the project manager needs to consistently follow through with doing them.

These face-to-face checkup meetings should be direct should also be light-hearted and thoughtful. The project manager should do more *listening* and less *yapping*. Here's an example of what not to do:

> I managed a team of software engineers at an embedded software development company in Seattle. We were always in a rush to release the next version of software and to relieve the stress I decided to hold these 20-minute checkups at a local espresso bar. I thought it was a good idea getting the team member outside of our normal work environment.
>
> After about ten of these short meetings, I asked the espresso staff why they were giving me such awful stares. They thought I was firing each of the engineers. Perhaps these meetings were a little too intense!

Would any of you students like to openly present amazing (or horrible) experiences you've had with performance appraisals?

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SELF-STUDY

https://www.screencast.com/t/SW1yLeYUBpV

Download the instructor's presentation slides and the topic's attachments from the video page by clicking the Details button. The downloaded, compressed package includes these files:

- *Monthly Performance Checkup - Example.docx*
- *Monthly Performance Checkup - Template.docx*
- *My Performance Checklist - Example.xlsx*
- *My Performance Checklist - Template.xlsx*

👥 TEAM EXERCISE

Divide the class into teams of no more than four team members each. Select one team member to be the project manager, one as the team member, and the other two as observers. (For web classes, select only four students for these roles.) Identify a project that is being performed in another class--like a computer science programming assignment. Using the downloaded *Monthly Performance Checkup - Template.docx* as a guide, the project manager writes down a set of tasks. With the help of the designated team member, group the tasks as either must haves or nice to haves. Then prioritize them in order of importance. Don't forget to define how each task will be measured! The observers lead a discussion about how task prioritization could be improved.

Pretend that a month has gone by and switch roles. The project manager and the task manager become the observers (and vice versa). The designated project manager pretends how the tasks were performed by the team member and grades the result (OU, EE, ME, NI, or UN).

At the conclusion of the discussion, an overall checkup grade is agreed upon. The observers lead a discussion on how task assessment could be improved. If there is time, repeat the process for the next monthly period.

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✅ T-Y-K

(Test Your Knowledge)

1   In the monthly performance checkup between the project manager and the team member, which one is false?
   A   Monthly priorities should support and align with an organization's needs identified under the "Goals" heading.
   B   A must have priority is a necessary requirement to be performed.
   C   The "Career Path" section is only included as a reference and doesn't have much to do with performance checkups.
   D   A nice to have priority isn't required to be performed but is often considered extra credit and a positive.

2   True or false: Frequent performance checkups are a practical way to evaluate individual performance. They help retain and motivate the team member.

3   Which of these is not a benefit to twenty-minute performance checkups:
   A   There aren't surprises of work that the project manager never prioritized.
   B   Once you agree to must have and nice to have priorities for the month, they can never be changed.
   C   If a team member struggles at completing the work, the project manager can quickly hop in and assist with corrective action.
   D   As techies tend to be withdrawn and work-focused, checkups are great ways to encourage communication with their project manager.

4   True or false: For each prioritized task in the performance checkup, the "How to measure?" column is probably the most important to openly discuss and clarify in writing.

5   In the section "Appraising Your Own Performance," which of the following best describes the reason for having your entire team fill out the "My Performance Checklist"?

    A   There's no reason to fill it out, I already know the results will be bleak!

    B   Upper management wants us to fill out the checklist and we should simply fill it out. I assume the project manager will initiate the next steps.

    C   Filling out the checklist just takes a minute or two and the results will show if each team member is in touch with what how their project manager thinks of their performance.

🔍 REFERENCES

1   Nelson, Bob and Peter Economy. *Managing for Dummies. 3rd Edition.* Hoboken, NJ: Wiley Publishing, Inc., 2010.

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