PM – responsible to make sure that a team ships a great product.

PM needs to set vision and strategy.

The PM defines success and makes decisions.

As a product manager, you’ll be the advocate for the customer.

PM: User needs >> Product Goals and Features >> Solves customer’s needs.

The product manager usually serves as the main liaison between the engineering and other roles. It’s usually the job of the product manager to identify times when one of those teams should be brought in, and to fill in for them if they don’t exist.

The day-to-day work of a product manager varies over the course of the product life cycle.

* At the beginning, you’ll be figuring out **what to build**.
* In the middle you’ll **help the team make progress**
* At the end you’ll be **preparing for the launch**.

Product life Cycle

* Research and Planning
* Design
* Implementation and Test
* Release

Research and Planning

* Thinking about what to build next
* Ideas may come from
  + Customer request
  + Competitive Analysis
  + New technology
  + User research
  + Sales and Marketing teams
  + Brainstorming
  + Big vision for the product
* Job of PM in this phase is to create/propose a roadmap
* Prioritizes features based on
  + Customer needs
  + Competitive landscape
  + Business needs
  + Team’s expertise
* “Once the PM has a proposed roadmap, he needs to bring other people on board”
  + Top-down approach – Get approval from executives.
  + Bottom-up – Get the nod from Engineers.
* Once the PM has chosen a feature set, he will become an expert on them. He will think deep about the problems he’s trying to solve and goals of the features.
* Define what success looks like
  + Uses models like Objectives and Key results to communicate the foals of the team

Design:

* Design the product features: defining the features and functionalities of the product (functional spec)
  + Goals
  + Use Cases
  + Requirements
  + Wireframes
  + Bullet points describing every possible state of the feature
  + Internationalization
  + Security
* PM is expected to make every user saving decision

Implement & Test: During the implementation stage, the product manager keeps track of how the project is going and makes adjustments.

* Sometimes, a feature that looked good during the design phase will not work as well as expected once it’s used in the real world. To find problems like this, teams will do usability studies, run experiments, and do internal “dogfooding.
* While dogfooding and usability studies are great for getting qualitative feedback, running experiments is a way to get quantitative feedback when you have online software. In an experiment, the new feature is turned on for a percentage of users (the experiment group), while the rest of users (the control group) keep using the product without the new feature.
* Prioritization is one of the product manager’s most important functions at this point; if the team were to fix every bug and build every new feature idea, the product would never launch. The PM needs to consider all of the new requests and decide if they should be prioritized for the current release or punted to a later time.

Release:

* When the development process is finished, the product manager needs to make sure the launch goes smoothly.
* The launch process varies from team to team but usually involves things like:
  + Running through a launch checklist. There might be final approvals from key stakeholders like Legal or coordination steps with teams like Marketing and Operations.
  + Making sure that the teams who will support the product going forward are prepared. For a web product this might be the customer service team; for a hardware product it could be the manufacturing team; for a service-based product it could be the operations team.
  + Preparing for all the things that could go wrong. As the release nears, urgent issues inevitably pop up, and the PM thinks on her feet to fight the fires.”
* After a successful launch, the PM usually announces the launch to the rest of the company, celebrates with the team, and then prepares to do it all over again. Depending on the team, the PM might continue to support the product after the launch, gathering metrics and iterating on user feedback, or the product might be handed over to another team for operations and maintenance.

Interview Questions:

1. Tell me about yourself: Design your pitch by thinking about what you want the interviewer to know about your background, experiences, and interests. Where possible, connect elements of your pitch to what the company is looking for, whether that’s aspects of the PM role specifically or the company’s product.
   1. There will be focus on comm.skills as well so make it crisp. 2 minutes is ideal
   2. Highlight the most interesting and/or relavant part of your jobs
   3. Don’t list off accomplishments as it can sound boastful. Your pitch should be a cohesive story about how you got from then to now. It should connect the different elements of your life and offer context for why you’re a good fit for this role
   4. Don’t get over technical After all, as a PM, you need to communicate with both technical and non-technical people.
   5. Discuss your “extracurricular” activities, where relevant. For example, if you’re applying to a fitness-related startup and you’ve started a marathon training group, that’s a good thing to mention. It shows a passion for the space, and possibly even expertise in it. Even when the extracurriculars are not directly applicable, they can often show initiative and leadership.
   6. Do practice but not sound scripty.
   7. Don’t speak too abstractly. Instead of just saying you did customer research and wrote specs, talk about an example of something important you learned and how you changed the product design based on that.
   8. Don’t be boring and just rattle off a bunch of facts about yourself. Weave your pitch into a mini-story. Be passionate and proud of your past work
2. Why you want to work here? An ideal answer will sell yourself in some way. Consider integrating one or more of these aspects into your answer:
   1. Company Research: You can use your answer to show that you’ve done research about the company or position. Doing research shows passion for the position, and passionate employees make good employees.
   2. Relevant experience: Your answer can actually communicate to the interviewer directly that you have relevant skills or experience.
   3. Passion: “It can be valuable to directly communicate passion for a position. This is especially true for startups that are focused on some sort of “greater good” for the world.”
3. Why should we hire you? Your answer to this question can include any or all of the following:
   1. Why you were a good PM:
      1. shown initiatives in current job
      2. Deep tech skills
      3. Successful PM in the past
      4. Back up answers with evidence
   2. Why you are a good fit for this space:
      1. Worked in area relevant to the team/company
      2. Mention what you know about the company or team’s industry
   3. Why you are good fit for this company’s cultute or work environment
      1. Sometimes there can be unique aspects of a company’s environment that makes you a good fit

The more you know about the company or position requirements the better. Before your interview, re-read the job description and come up with examples to match what the company is looking for.Many of the elements of your answers to “Tell me about yourself.” and “Why do you want to work here?” apply to this question, but you would use these elements more directly.

Responding in a well-structured way to a fairly open-ended question will not only demonstrate to your interviewer that you are a strong communicator, but it will also help your interviewer retain the information you give him.

Chapter 13:

Estimation questions: Is all about the process you take to solve them. Nobody cares if you know the right answer. It’s to evaluate your quant and problem-solving skills

**How to answer the estimation questions:**

Step 1: Clarify the question:

* Repeat the question to make sure that you heard it well
* Clarify all the ambiguities

Step 2: Catalog what you know or wish you knew

* Ask interviewer for some of these facts but be prepared to compute some of these too
* When in doubt leave your question open ended: “Could you tell me the click-through rate of an advertisement, or would you prefer that I compute it?” If your interviewer pushes back by saying something like, “What do you think it is?” that’s a good sign that you might be relying on questions too much.”

Step3: Form the equation to solve the problem

* Before deciding on one equation look at multiple equations also

Step 4: Think about edge cases and alternate sources

* For example, if you’re computing the number of pizza places in the US, have you considered college towns? Or, if you’re computing how much it would cost to wash all the windows in your city, have you taken into account broken windows (which you presumably won’t wash)? Or even car and bus windows?”
* Is there some source that you haven’t considered? For example, if you were computing the number of guns sold every year, have you included illegal sales? Sales to police as well as consumers? What about race tracks using blanks?

Step 5: Break it down:

* Solve each component of the equation
* For each part of the main equation, construct a sub-equation. Keep each part of the original equation separate; don’t try to merge them into one mammoth equation. You might even draw a line down the page (or whiteboard) to keep these computations entirely separate.

Step 6: Review and state your Assumptions

* Be aware of your biases. Yes, everyone that you know has a smartphone, but is this really representative of the entire US? Probably not.
* Pick nice, round numbers, and state your assumptions clearly to your interviewer. Keep the list of assumptions you made in Step 2 updated, or find some way to clearly identify where you’ve made an assumption.
* Be sure to tell your interviewer why you’re making the assumptions you are. Your reasoning is more important than the precise number.

Step 7: Do the math

Step 8: Sanity Check

* Go back through and check your work. If there’s an issue, it’s probably in one of the following areas:
  + Original equation.
  + Assumptions made.
  + Arithmetic.

**Tips and Tricks:**

* Stick to round numbers
* Use rule of 72 to determine how long until something doubles. Ex: 72/ 9% increase = doubling in 8 years
* Order of magnitude: When multiplying two large numbers, it’s easy to make a mistake. This isn’t a big deal if you’re off by something in the 1s digit, but if you add an extra zero or forget a zero, you can wind up off by 10x or more. That is a big deal.
* Be Confident
* Label your units
* Consider your sources: For example, suppose you were asked how many elevators were needed for a one-block long, one-block wide, 20-story building. You’ll probably chug along doing some work with the number of people in the building and how often they need to use the elevator. But have you thought about the freight elevator? That’s a “source” too!
* Keep Discrete steps discrete: The more organized you can be, the better. If your estimation question has several independent steps, you should try to compute them separately. If (or when!) you make a mistake, you’ll be able to come back to it, narrow in on the exact mistakes, and correct it with minimal hassle.
* Record intermediate steps: While some estimation questions are very short, most are fairly lengthy and require numerous calculations. It’s important that you write down what you’re doing as you’re doing it. You might need to come back to it later to correct your work or even to reuse a previously computed number.
* Record your assumptions: It’s not uncommon for your final answer to be wildly off. When this happens, there are two main reasons: either you made a math mistake (in which case being organized will help you locate it) or one of your assumptions was wrong. Therefore, the easier it is to identify where you made an assumption, the easier it will be to discover potential issues.