

K. J. Somaiya College of Engineering, Mumbai-77

(Autonomous College Affiliated to University of Mumbai)

End Semester Examinations

April - May 2018

Max. Marks: 100

Class: TY B.Tech

Name of the Course: IT as Enabler for Startup

Course Code: **UITI605**

Duration: 3hrs

Semester: VI

Branch: IT

Instructions:

- (1) All Questions are Compulsory
- (2) Draw neat diagrams
- (3) Assume suitable data if necessary

Question No.		Marks
Q 1 (a)	<p>Prepare survey with close ended unordered response for validating following startup idea. (Minimum 5 Questions)</p> <p>The startup idea is to establish a platform where aspiring students who wish to take admission in top universities and colleges can come and connect with the current students and alumni of such schools and get advice on how to be admitted.</p> <p>Evaluation: 2 Marks for each related close ended unordered survey question for the idea</p> <p>Solution: Example of close ended unordered survey question for the idea</p> <p>From where you learn about credibility of universities where you aspire to take admission?</p> <ol style="list-style-type: none">a. From University Website itselfb. From other websitesc. From friendsd. From teachers <p style="text-align: center;">OR</p> <p>Prepare and discuss detailed activity map for above mentioned startup.</p> <p>Evaluation: 6-8 Marks for detailed activity map diagram 2-4 marks for brief discussion of activity map</p>	10
Q 1 (b)	<p>Discuss venture financing in detail.</p> <p>Evaluation: 2 Marks for detailed diagram 2 Marks each for brief discussion on different venture financing</p> <p>Solution:</p>	10

Sources of new venture financing

	Development	Start-up	Early Growth	Rapid Growth	Exit
Bootstrapping					
Friends and Family					
Angel Investors					
Venture Capital					

Red shading indicates main form of financing available. Gray shading indicates secondary sources for financing.

Bootstrapping:

- In the early stages of the venture, self funding (also known as bootstrapping) will be the most common form of financing available.
- This means that the entrepreneur will need to invest private funds which include savings, credit cards, second mortgages, and personal loans

Friends and Family:

- The amount of money attained from this source is usually a small sum that can be used to help “finish the business plan, create a prototype, or conduct validating research”.
- Furthermore, the money provided is often referred to as “love money” because their investments are made out of affection rather than based on the merits of the venture.

Angel Investors:

- Generating sales takes time and sale receipts are usually not enough to offset start-up costs and expenses.
- Because of this, the entrepreneur needs money to help the company grow.
- That’s where an angel investor comes in.
The main reasons angels invest can be summed into three main categories:
opportunity for financial gain,
playing a role in the entrepreneurial process,
and certain nonfinancial factors.

Q2 (a)

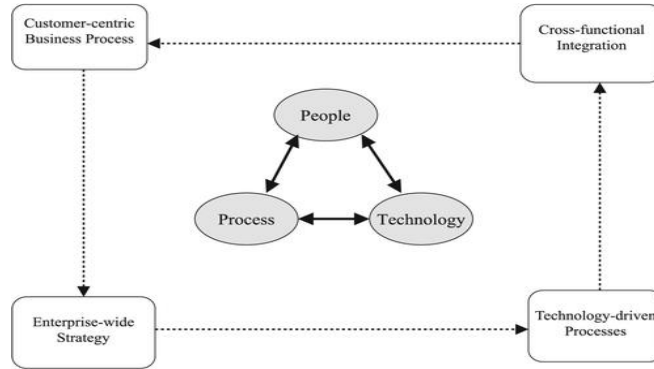
Discuss CRM implementation model.

10

Evaluation:

4 Marks for detailed diagram

2 Marks each for brief discussion on three different dimensions of model

Solution:

A CRM implementation model that integrates the three key dimensions of people, process, and technology within the context of an enterprise-wide customer-driven, technology-integrated, cross-functional organization.

Technology:

- Information technology (IT) has long been recognized as an enabler to radically redesign business processes in order to achieve dramatic improvements in organizational performance.
- CRM applications take full advantage of technology innovations with their ability:
 - to collect and analyse data on customer patterns,
 - interpret customer behaviour,
 - develop predictive models,
 - respond with timely and effective customized communications,
 - deliver product and service value to individual customers.

Process:

- In a product-focused approach, the goal is to find customers for the products using mass marketing efforts.
- In a customer-centric approach, the goal becomes developing products and services to fit customer needs.

In Seybold's work, five steps in designing a customer-centric organization were suggested:

- make it easy for customers to do business;
- focus on the end customer;
- redesign front office and examine information flows between the front and back office;
- foster customer loyalty by becoming proactive with customers; and
- build in measurable checks and balances to continuously improve.

People:

- Many departments and individuals see customer handling as a sales or marketing function, and regard the release of their data to another function as a loss of power.
- A customer-centric model requires sharing the data enterprise-wide; this usually requires a fundamental paradigm shift in the culture to sharing information and knowledge.

OR

Explain business hypothesis with example.

Evaluation:

4 Marks for Discussion on business hypothesis

6 Marks for examples of business hypothesis

Solution:

- Each experiment for hypothesis testing should include three parts:
 - **Hypothesis:** Which assumption are you validating?
 - **Test design:** How will you validate this assumption?
 - **Outcome:** What did you learn from the results of the hypothesis test?

By 'hypothesis' we mean an explicit statement about an assumption that your business model is based on.

Types of Hypothesis:

- Qualitative Hypothesis
- Quantitative Hypothesis
- **Qualitative hypothesis** testing is great for exploring each persona, their perceptions and interactions with your product.
- The results might not be representative of everyone in the market for your product, but will help you get to the early adopters in the market.
- **Example of SmashBulb:**
 - Hypothesis:
 - Choosing a Persona 'Off mood Oscar' who is always in rough mood.
 - So, our very first hypothesis might be to find someone roughly resembling this persona and ask in very general terms: "What does a Off mood Oscar ' think of our product idea?"
 - Test design:
 - To test this hypothesis and explore the multiple possible answers, we might go to a local graduate student hang-out near university and try and talk to at least one person like Oscar.
 - This might require talking to ~10 people until we find one that is a closer fit to the George persona.
 - Outcome:
 - After interviewing, we then focus on recording all of feedback, including responses we did not anticipate.
 - The feedback and lessons learned will be very specific to that individual, and may not be generalizable to a larger segment in the market.
 - So, the feedback received should be taken with some caution, in case the person we interviewed is as unique as Oscar, and not at all representative of additional customers.

	<p>Even at a relatively early stage, one can start to use quantitative metrics to test business model hypotheses.</p> <p>Assuming that personas have generally validated, now one might want to take a closer look at some of the product features.</p> <ul style="list-style-type: none"> • Example of SmashBulbs: <ul style="list-style-type: none"> – Hypothesis: <ul style="list-style-type: none"> • What sales model (price and quantity) is most attractive to our customers? Or, more specifically, "Are our customers more interested in (i) single purchases at \$10/item, (ii) 6-packs at \$50 (a 16% discount), or (iii) monthly subscriptions of 10 SmashBulbs at \$75/month (a 25% discount)?" – Test design: <ul style="list-style-type: none"> • To test this hypothesis, we could create, for free, a relatively simple website that summarizes each of these three options. • We could then show the website to a group of potential customers by posting the URL in a Facebook group for graduate students at a local university. Using the site, we could then watch their behaviour using website analytics. – Outcome: <ul style="list-style-type: none"> • Using analytical data of the traffic on the site, we could learn that between 6-8 times more people clicked on the link to order a single product, than the subscription model, and no-one clicked on the 6-pack order link. 	
Q2 (b)	<p>Prepare business model canvas for following startup.</p> <p>Booking.com</p> <p>It offers cheapest rate for customer with wide variety of choices for hotels. Booking.com's app not only has useful content prior to the booking but also travel guide functionality in their app. Booking.com features reviews only from those who have booked through them. Thus the star rating and reviews generated by other users reduce the risk of being disappointed.</p> <p>Booking.com allows hotels to implement their revenue management strategy by providing the ability to flexibly decide/change which rooms they offer through Booking.com on which nights and its rates. Booking.com has localized content, payment options, apps, etc. They also translate the hotel content into the local language and are present on the relevant advertising channels.</p> <p>Booking.com shares market intelligence, booking forecasts for given locations as well as how the hotel is performing on the Booking.com platform in relation to competition.</p> <p>Evaluation: 6-8 Marks for detailed Canvas diagram 2-4 marks for brief discussion of Canvas</p>	10

	<p>Solution:</p> <table><tr><td>Key partners<ul style="list-style-type: none">- Hotel/property owners- Major hotel chains- Affiliates- Travel agents- Corporate travel managers- Technology partners- Meta search engines- Lobbyists</td><td>Key activities<ul style="list-style-type: none">- Manage network effects- Customer experience- Customer support- Grow the platform- Observe external factors- Enhance technology- Guide customer journeyKey resources<ul style="list-style-type: none">- Number of hotels- Number of locations- Great content- User data/algorithms- User experience- Global network- Skilled staff</td><td>Value proposition<p>For travellers:</p><ul style="list-style-type: none">- Cheapest prices- Amount of choice- Reduction of risk- Customer service- Useful app- Useful travel content<p>For hotels:</p><ul style="list-style-type: none">- Incremental revenue- Ability to react- Global reach- Risk reduction- Additional web traffic- Market intelligence</td><td>Customer relationships<p>Hotels:</p><ul style="list-style-type: none">- Commissions- Ease of joining- No booking, no pay<p>Travellers:</p><ul style="list-style-type: none">- Customer service- AccuracyChannels<ul style="list-style-type: none">- Website (mobile, desktop)- App- Partner channels- Ad channels (meta search engines, etc)- Comms channels</td><td>Customer segments<p>Hotels:</p><ul style="list-style-type: none">- Property types- Room types- Star & user ratings- Amenities, facilities- Proximity- Type of hotel- Locations- Type of infrastructure<p>Travellers:</p><ul style="list-style-type: none">- Travel motivation- Demographics- Booking details- Employment- Spending behaviours</td></tr><tr><td colspan="2">Cost structure (FY 16)<p>Operational</p><ul style="list-style-type: none">- Performance advertising: \$3.4b- Brand advertising: \$0.29b- Sales and marketing: \$0.43b</td><td colspan="3"><ul style="list-style-type: none">- capitalised costs: \$54.2m<p>Balance sheet:</p><ul style="list-style-type: none">- Property & equipment: \$347m- Intangible assets: \$2b- Goodwill: \$2.4b</td><td>Revenues (FY 16)<ul style="list-style-type: none">- Agency business model: \$7.98b/\$10.7b = 74%- Merchant business model: \$2b/\$10.7b = 19%- Advertising and other revenues: \$0.7b/\$10.7b = 6.6%</td></tr></table>	Key partners <ul style="list-style-type: none">- Hotel/property owners- Major hotel chains- Affiliates- Travel agents- Corporate travel managers- Technology partners- Meta search engines- Lobbyists	Key activities <ul style="list-style-type: none">- Manage network effects- Customer experience- Customer support- Grow the platform- Observe external factors- Enhance technology- Guide customer journey Key resources <ul style="list-style-type: none">- Number of hotels- Number of locations- Great content- User data/algorithms- User experience- Global network- Skilled staff	Value proposition <p>For travellers:</p> <ul style="list-style-type: none">- Cheapest prices- Amount of choice- Reduction of risk- Customer service- Useful app- Useful travel content <p>For hotels:</p> <ul style="list-style-type: none">- Incremental revenue- Ability to react- Global reach- Risk reduction- Additional web traffic- Market intelligence	Customer relationships <p>Hotels:</p> <ul style="list-style-type: none">- Commissions- Ease of joining- No booking, no pay <p>Travellers:</p> <ul style="list-style-type: none">- Customer service- Accuracy Channels <ul style="list-style-type: none">- Website (mobile, desktop)- App- Partner channels- Ad channels (meta search engines, etc)- Comms channels	Customer segments <p>Hotels:</p> <ul style="list-style-type: none">- Property types- Room types- Star & user ratings- Amenities, facilities- Proximity- Type of hotel- Locations- Type of infrastructure <p>Travellers:</p> <ul style="list-style-type: none">- Travel motivation- Demographics- Booking details- Employment- Spending behaviours	Cost structure (FY 16) <p>Operational</p> <ul style="list-style-type: none">- Performance advertising: \$3.4b- Brand advertising: \$0.29b- Sales and marketing: \$0.43b		<ul style="list-style-type: none">- capitalised costs: \$54.2m <p>Balance sheet:</p> <ul style="list-style-type: none">- Property & equipment: \$347m- Intangible assets: \$2b- Goodwill: \$2.4b			Revenues (FY 16) <ul style="list-style-type: none">- Agency business model: \$7.98b/\$10.7b = 74%- Merchant business model: \$2b/\$10.7b = 19%- Advertising and other revenues: \$0.7b/\$10.7b = 6.6%	
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Q3 (a)	<p>Apply any two digital marketing channel for marketing of following startup Gymlisted</p> <p>Website for finding the right private gym. Offers following features:</p> <ul style="list-style-type: none">•Search Gym by city/location•Gym listing page, with the ability to add descriptions, services at the gym, and photos•Membership management and purchasing <p>Evaluation:</p> <p>5 Marks each for any two digital marketing channel</p> <p style="text-align: center;">. OR</p> <p>Apply SEO techniques of Keyword Optimization and Link Optimization to improve ranking of Gymlisted website.</p> <p>Evaluation:</p> <p>5 Marks each for two SEO optimization techniques</p>	10											
Q3 (b)	<p>Explain social media marketing in detail.</p> <p>Evaluation:</p> <p>6 Marks for Discussion on social media marketing</p> <p>4 Marks for examples of social media marketing</p>	10											
Q4 (a)	<p>Discuss website design mistakes.</p> <p>Evaluation:</p> <p>1 Mark each for correct website design mistakes with brief description</p>	10											

	Solution: <ol style="list-style-type: none"> 1. Bad search 2. PDF files for online reading 3. Not changing the color of visited links 4. Non-scannable text 5. Fixed font size 6. Page titles with low search engine visibility 7. Anything that looks like an advertisement 8. Violating design conventions 9. Opening new browser windows 10. Not answering users' questions 	
Q4 (b)	<p>Upload a photo of furniture of a piece of home I, and select between “find” or “match” options. The “find” option would bring up very similar options and let you sort by price point and delivery time, so you could find the designer table you saw in a magazine.</p> <p>The “match” option would recommend items that go well stylistically with that item. All of that instantly delivered through an app or website.</p> <ul style="list-style-type: none"> • Create two personas for above website. • Draw Use case. • Discuss Scenario <p>Evaluation:</p> <p>2 Marks each for two personas 4 Marks for Use Case 2 marks for Scenario</p> <p style="text-align: center;">OR</p> <p>Apply following principles of mobile Ux to prepare mobile app layout for above mentioned app.</p> <ol style="list-style-type: none"> i. Search ii. Transact <p>Evaluation:</p> <p>5 Marks each for two principles of mobile Ux</p> <ul style="list-style-type: none"> – 3-4 Marks for Diagram – 1-2 Marks for brief description 	10
Q5 (a)	<p>Explain following web based project management tools:</p> <ol style="list-style-type: none"> i. Asana ii. Basecamp <p>Evaluation:</p> <p>5 Marks each for web based project management tools for discussion on</p> <ul style="list-style-type: none"> • 1-2 Marks for brief description on Purpose • 4-3 Marks for features 	10

Solution:**Asana**

- It is a web-based project management tool.
- It was designed to improve team collaboration working in a particular project.
- Asana was created to replace the use of email for work communication and collaboration.
- Two options are available to work with Asana
 - Web Application
 - Mobile Application
- Some important term in Asana
 - Organizations are the highest level of hierarchy for your business.
 - Workspace is a virtual space where your team will work together in a given project/projects.
 - It can be synonymous with your whole company, or you can have a separate workspace for, say, each client that you work for.
 - Projects are lists of tasks to be completed.
 - One level below, workspaces are where all projects live.
 - They are a main organizational unit in Asana and can be both public and private.
 - Plus, they can be displayed through different filters: priority, assigned people, and tags.
 - Tasks are the basic unit of work. Each task represents work need to accomplish.
 - Besides the title of the task, one can add a description with further details and directions about it.
 - One can create subtasks for more complex jobs, and include attachments to keep relevant documents in the right place.
 - Files can be uploaded directly to Asana or through Google Drive, Dropbox and other cloud drives.
 - Tasks can be tagged, so they can be easily discovered in context.
 - Teams are group of people working together to complete a project or projects.
 - The group of people who are members of the workspace is visible in the menu Team.
 - Each of these members can assign and be assigned to projects and tasks.
 - Team leaders have a great level of control because they can adjust how much a member can alter projects and tasks and what is visible to them.
- Steps to begin with Asana
 - Create account with Asana
 - Add first task
 - Tasks can be to-dos, ideas, notes, or reminders.
 - After adding few tasks, create project
 - Add collaborators/ Create teams

Basecamp

- Basecamp is a web-based project-management tool that launched in 2004.
- Basecamp offers to-do lists, wiki-style web-based text documents, milestone management, file sharing, time tracking, and a messaging system.
- Basecamp is an excellent way to bring project members, managers, and clients together in one complete and unified application.
- Basecamp can be used to track file downloads, messages, and feedback, and view deadlines for both tasks and milestones.
- It's FREE for all clients to sign-up
- Two options to work with Basecamp
 - Web Application
 - Mobile Application

Features

- Communication
 - Message Boards
 - Real Time Chat – Using BaseCamp “Camp Fire”
 - Optional Email Notifications
- Document Management
 - Share Files; Versioning Control
 - Writeboards
- Project Details
 - To Do Lists and Milestones
 - Reuse Templates
 - Apps for Androids, Blackberrys, and iPhones

Basecamp offers following tools and capabilities:

- User Profile
- Messages
 - Messages are similar to e-mails.
 - They can be sent to anyone involved in the project.
- To-Do Lists & Tasks
 - To-do's come in two forms: a list and a task.
 - The tasks make up the to-do list.
 - Tasks can be assigned to an individual within the project and given a due date.
 - Task lists can be associated with a milestone in the project.
- Milestones
- File Downloads
 - All files (i.e. images, videos, documents, etc.) can be added to the project using this file upload feature.
 - Files can be uploaded in one of two ways: uploading them directly to the “Files” area of the site, or by attaching them in a message or comment.
- Writeboards
 - Writeboards can be used to create and edit website content so that it can be shared and collaborated on with all project members.
- Commenting
 - Comments can be made on all items (except for to-do lists) in Basecamp.

Q5 (b)	<p>Apply SWOT analysis on given web startup</p> <p>A technology passionate team wishes to launch Online Custom Tailoring website. The custom clothing industry is still relatively untapped, so starting a business now will offer team a significant potential for growth in the future. In addition to having their pieces delivered directly to their homes, team can offer customization of: Fabric, Patterns, Size, Fitting, Stitching, and Lining.</p> <p>(State assumptions, if any)</p> <p>Evaluation: 2 ½ Marks each for Strengths, Weaknesses, Opportunities and Threats</p>	10
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