

Animation and Film Design | Degree Project Report
[Preproduction]

ROLE PLAYING GAME



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Indian Institute of Technology
Bombay
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Certificate

The Animation and Film Design Degree Project submitted by Ravi Rao Yamijala, M.Des Animation [126340004], is approved in fulfillment of requirements for the award of the Masters of Design Degree at Industrial Design Centre, Indian Institute of Technology, Bombay.

Project Guide

1.  _____ 2. _____

Internal Examiner

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Mr. B. K. Chakrabarty
[Head of Department]

21 / 07 / 2015, Mumbai.

Acknowledgement

I owe my sincere gratitude to Prof. Sumant Rao and Prof. Phani Tetali for showing undoubted trust in me and my capabilities in designing this game. I am thankful for their aspiring guidance, invaluable constructive criticism and friendly advice during the project work that has helped me execute this game design with confidence.

I would like to thank Prof. Shilpa Ranade, Prof. Nina Sabnani, and Prof. C. P. Narayan for their invaluable feedback, suggestions and insights during the course of the project. I would like to extend my special Thanks to Mr. B.K. Chakrabarty (Head of the Department, Industrial Design Centre, IIT Bombay) who believed in me and extended all his support and advice towards my academics.

I express my warm thanks to my parents for their love and motivation that kept me going. I thank all my friends who helped me during my research and execution of this project. Thank You: Shrishti Gupta, Akshay Murthy, Antariksh Jain, Divya Bhardwaj, Jay Menon, Gauthaman Koyamparambath, Sundeep Thusu, Keerti Chowdhary, Jaishrish Udai, Mridul Basumotari, and Dharma.

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Abstract

“The reason most kids don’t like school is not that the work is too hard, but that it is utterly boring.” — Dr. Seymour Papert, Prof. at the MIT

The most practiced method of education across the globe has been the ‘Traditional Educational System’, also known as the conventional method of learning. In this authoritarian approach, the teachers coach a preset curriculum of factual information and skills to a group of students using learning tools such as textbooks and lectures.

With time, research studies in cognitive, emotional and environmental learning over conventional teaching techniques have initiated reforms in educational system, opening doors towards learning outside textbooks and classrooms. Because every learner has different core-abilities, skillsets, or emotional intelligence, they learn best when they enjoy something thoroughly. An analysis of the learning process highlights that “Concentration” stands out as the prime feature, followed by “Understanding” and finally “Remembering”. An interactive learning technique engages the learner, heightening his concentration, and enabling him to understand and remember far better than what he would, only by reading or listening.

As early in the 80s and 90s, when digital revolution was changing the face of every possible business and industry, researchers predicted that computers could be used as a cognitive tool for learning purposes and also foretold other possible benefits that learning via human-computer interaction would offer. In recent times, education experts, in collaboration with experts from computers and interactive media industries, have introduced Computer Animation and Games as one of the techniques popular in experiential learning; an approach now widely adopted as progressive educational system at Institutions across the globe.

Animation as a medium of storytelling or interaction has the power to engage and entertain the viewers for long duration of hours, making the process of interactive teaching and learning more effective. Computer games offers great learning in skills and strategies and creates opportunities for knowledge within a virtual world, thus supporting and facilitating the experiential learning process even more.

My project is an initiative in interactive learning for educational and entertainment purpose, a collaboration between animation and computer gaming and traditional form of storytelling of educational content, for an effective learning process.

Introduction

'Man is the Storytelling Animal, and that in stories are his identity, his meaning, and his lifeblood.' — Sulman Rushdie

This project roots back to my experiences and my passions as a child, today, which I pursue as a student of M.Des (Animation) at IDC, IIT, Bombay.

I have always enjoyed the process of storytelling, especially in its visual medium. May it be Puppetry, Drama, Films or any other form of narrative, they have always caught my interest. Also early as a child, I developed a keen interest in the possibilities offered by the digital technologies and new age media. I sought new challenges and passion in computer softwares and the creative opportunities that were possible. I undertook formal education in human-computer interaction, communication and design and passionately pursued animation studies as a medium to tell stories.

Going forward, for this project, I thought upon various topics of my interest that I would have liked to narrate with an animation film. I have always been mesmerized by ruin structures and the magnificent architecture of these historical monuments. It fascinates me to learn more about the kingdoms that once ruled these places, their strategies in building forts and empires, their battles and wars, and their rise to peak and eventual fall.

Having keen interest in both history and architecture, I have travelled to several Indian ruined forts or sites of historical and archeological importance. I recollect, on several such visits, I would enjoy the process of visualizing the place in its full glory. For those few moments, imagining kingdoms, ruling kings and their battles would bring the place and its history to life that I desired to experience somehow in first person.

This got me to thinking how I could converge narrative with an experience for myself and audiences like me; leading to the obvious, interactive storytelling. I enjoyed playing computer games like all my other friends; while they were more into strategy gaming, role playing or first person shooters, I played games because I was intrigued by the gaming experience, the environment, the characters, structures and the lesser told stories.

I decided to create a role playing game focused on educating the gamer/ audience on certain aspects of history of India. While role-playing gaming is popular amongst avid gamers for obvious reasons, interactive and experiential learning (of events in history) would prove more efficient learning technique over learning by simply studying history from books.

Project brief

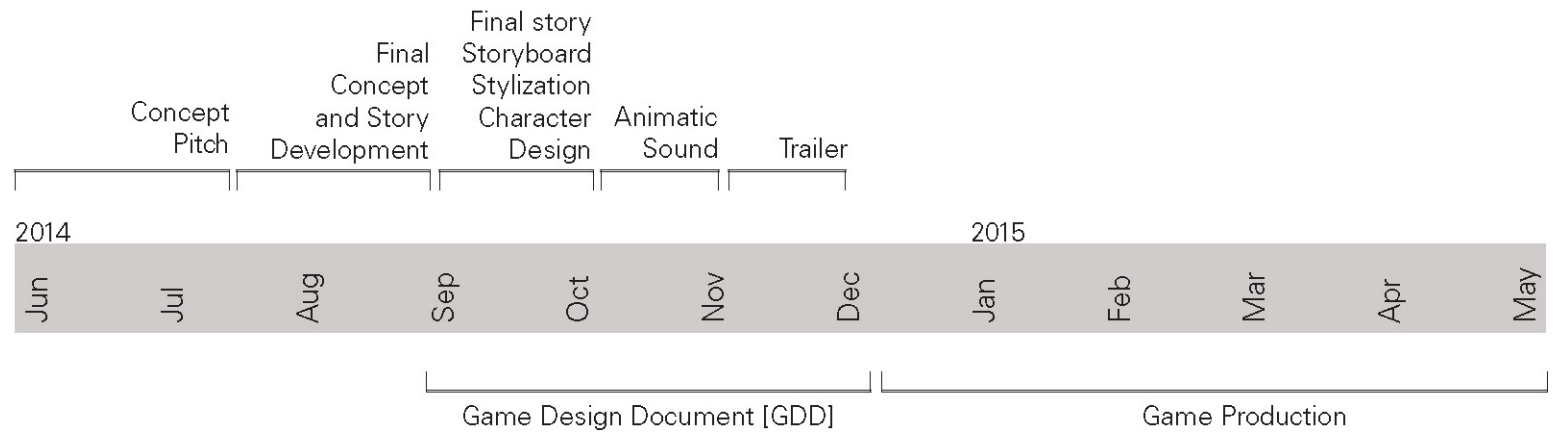
My project is an initiative in interactive learning for educational and entertainment purpose, which collaborates animation and computer gaming with traditional storytelling technique. I am designing a role-playing game, focused on engaging and educating the gamer/ audience, using techniques of interactive and experiential learning (of events in Indian history), a more efficient tool over studying history from books.

Project brief

The 2nd year M.Des Academic Project is divided into two phases.

Phase I Includes a cinematic Trailer for the game

Phase II Includes the complete Game Design Document and its Working Prototype



Phase I: Trailer: Research



I started with the thought of creating a fictional story woven around a fictional place, inspired by the existing famous ruins, in which the player can design and experience a story of his own fantasy in first person.

In my concept and story development meetings with my guides Prof. Sumanth and Phani, they suggested I pick an existing story/ legend and ruin from Indian History that would justify the educational aspect of the role-playing game.

Working on this feedback, I started my journey by recollecting and reading upon the stories of Indian kings and kingdoms that I had learnt in my days of schooling. It was important for me to pick a historic event that is a part of our education curriculum and that portrayed key aspects of bravery and goal achieving which the player would relate to.

Intrigued by the great Maratha Kingdom and Shivaji, I started reading more about their reign and their legendary battle wins and war strategies. I stumbled upon some very interesting facts, such as:

** When in its full glory, the Marathas had control of more than 70% of the present Indian Territory.

** Also, the Marathas laid the foundations of the Indian Navy, bringing about considerable changes in naval warfare and introducing a blue-water Navy.

I decided that I would like to design my game on one of the legendary stories of Maratha Empire and I focused my research further on Shivaji and his leadership.

Phase I: Trailer: Research: The Marathas



The Marathas hail typically from the western state of Maharashtra in India. The Maratha Empire was an Indian imperial power that ruled from 1674 to 1818.

Shivaji Bhonsle was the Indian warrior king and a member of the Bhonsle Maratha clan. Shivaji, in 1674, carved out an enclave from the declining Adilshahi sultanate of Bijapur that formed the genesis of an independent Maratha Empire and declared Raigad as its capital.

Shivaji established a competent and progressive civil rule with the help of a disciplined military and well-structured administrative organisation. He innovated military tactics, pioneering the guerrilla warfare methods (Shiva Sutra or Ganimi Kava), which leveraged strategic factors like geography, speed, and surprise and focused pinpoint attacks to defeat his larger and more powerful enemies.

Shivaji expanded his empire by conquering and building new forts across his territory. During his reign, Shivaji had 370 forts in his possession.

The following are some of the notable forts of the Maratha Empire:

- Torna fort
- Panhala fort
- Pratapgadh fort
- Rajgad fort
- Shivneri fort
- Sindhidurg fort
- Purandar fort
- Sinhagad fort



Phase I: Trailer: Research: The Marathas



Notable features of Shivaji's forts include:
Architectural plans and designs were in accordance with the topography of the region
There was no repetition or monotony in design
There were no ornate palaces or gardens or temple complexes
The fort of Pratapgad and Citadel of Rajgad had double line fortification to protect them against attacks and enemy
There was not much geographical distance in the settlements between the higher and lower ranks of the kingdom
The acoustics was marvelous in the fort and place in the capital city

All the fort names were in Sanskrit language, duly respecting his roots.

Shivaji introduced community/ regiment participation in defense army at the forts

He advocated 3-tier administration of his forts

He laid out a system for inspection of the forts by higher authorities including the king

Shivaji is known to have a very keen foresight in selection of his sites for building forts.



Phase I: Trailer: Research: The Sinhagad Fort

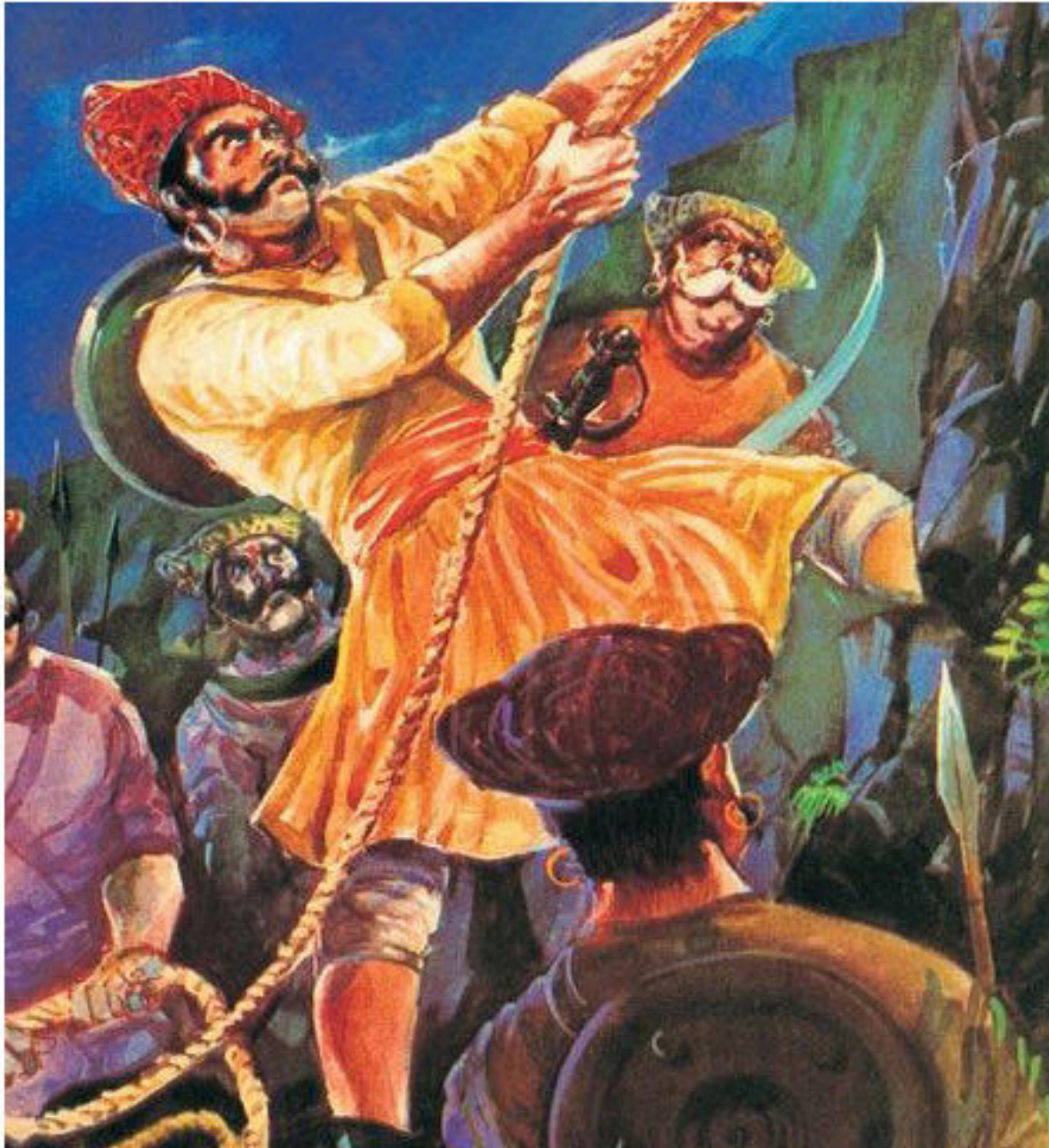


Sinhagad, (The Lion's Fort), is a fort located about 30 kilometres southwest Pune, India. Earlier known as Kondhana, the fort has witnessed many important battles, specially the battle of Sinhagad in 1670. It was also strategically located at the centre other forts in vicinity such as Rajgad, Purandar and Torna.

It was called 'Kondana' after the sage Kaundinya. The Kaundinyeshwar temple, the caves and the carvings indicate that this fort had probably been built two thousand years back. It was captured from the Koli tribal chieftain, Nag Naik, by Muhammad bin Tughlaq in 1328 AD.



Phase I: Trailer: The Story



When in the 17th Century AD, most of the regions in India were under the Mughal rule; Shahaji Raje Bhosale brought the House of Bhosale into prominence. He was inherently an excellent administrator and a brave warrior and he founded the Maratha Empire under his fierce military and leadership skills. It is believed that in his entire lifetime, he had not lost a single battle no matter what circumstance.

It was during this time of his reign in the Pune region, when Shahaji was serving the Adilshahi court; Shivaji was born to Jijabai, Shahaji's first wife, at the Shivneri fort near Pune. Shahaji instilled great courage in Shivaji since his childhood and enabled him to become a superior war strategist, an able administrator and an Independent ruler. After Shahaji's death, Adil Shah tried all means to gain control over Shivaji but failed miserably. Instead, Shivaji dreamt of setting up the Hindavi Swarajya that seek to end all Mughal or foreign rule.

Sinhagad fort, then known as Kondhana fort, has been a site for many important battles in the history of Maratha Empire. The Kondhana fort found its name, Sinhagad after the notable battle in March 1670 AD between the Mughal Sultanate and the Marathas; latter of which was led by the young and fearless Shivaji Bhosale.

Located 30 Kms southwest of Pune city and at the center of the string of other Maratha forts: Raigad, Purandar and Torna; strategically it served as the potential capital of the rising Maratha Empire. Jijabai's painful sorrow and tears in her eyes inspired and enabled Shivaji's re-conquest of the fort under the Maratha Empire.

Phase I: Trailer: The Story



The Kondhna fort, perched upon an isolated cliff of the mighty mountain ranges, and its surroundings; manned by the fort keeper Udaybhan Rathore and an army of about 5000 Mughal soldiers, was under the control of general Mirza Raja Jai Singh of the Mughal Empire. As insisted by his mother, Shivaji commenced upon strategic plans to capture the fort. He called for his childhood friend and army commander Tanaji Malusare, second in command and Tanaji's younger brother Suryaji and an army of 500 Maratha soldiers, who were also known as Mavalas, to devise a plan to capture the fort.. Shivaji entrusted Tanaji with the job to re-capture the fort under the Maratha Empire.

The fort had two major entrances Pune Darwaja and Kalyaan Darwaja, heavily guarded by the Mughal army, and was defended by cannons at each turret. After a detailed recce of the fort, Tanaji found one turret left unguarded, for it was at the top of a very steep cliff, seemingly impossible to scale. Tanaji picked a moonless Friday night in the month of March, the day the Mughals would celebrate festivities late into the night and the security would be weak, to carry out the battle.

The legend goes, with the help of Tanaji's pet Yashwanti, a Ghorpad (as called in Marathi) or a monitor lizard, the army designed a plan to scale up the assumably impossible and steep cliff in order to strike the attack. Since monitor lizards have an extremely firm grip, Tanaji ordered one of his soldiers to tie a rope around its waist and use it as an anchor to scale up the cliff. While making the climb in the night, Tanaji lost about 67 of his brave and precious soldiers to the limitations of the terrestrial difficulties. When the army reached the turret, they immediately attacked a fierce battle onto the Mughals, when they were least expecting it.

During the battle, about 400 odd Maratha men bravely fought close to 5000 strong Mughal soldiers. Tanaji engaged in a fierce swordfight with the Udaybhan, fort keeper, and as a resultant his shield broke. He immediately replaced his broken shield with his headgear by tying it around his arm, but could not fight for too long and succumbed to death with deep injuries.

Phase I: Trailer: The Story

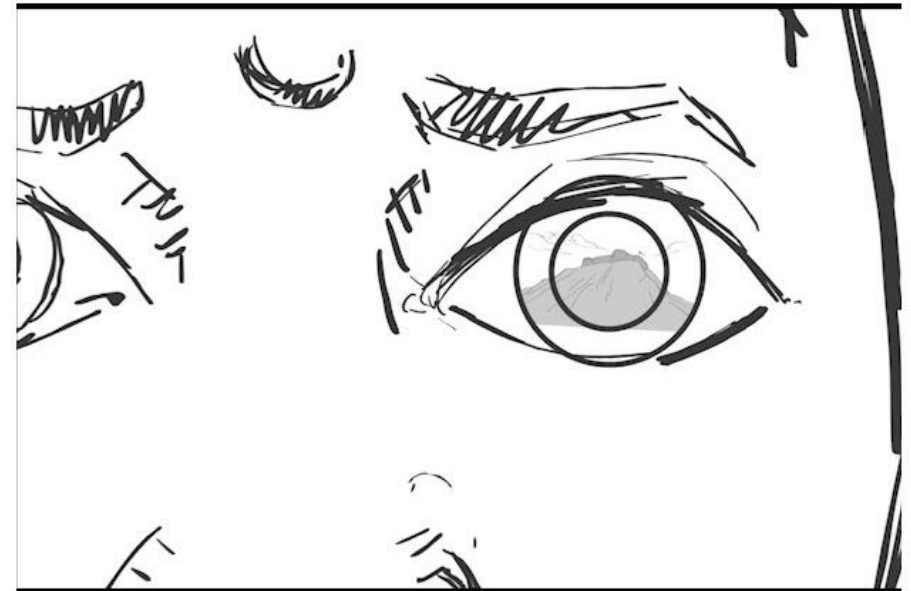
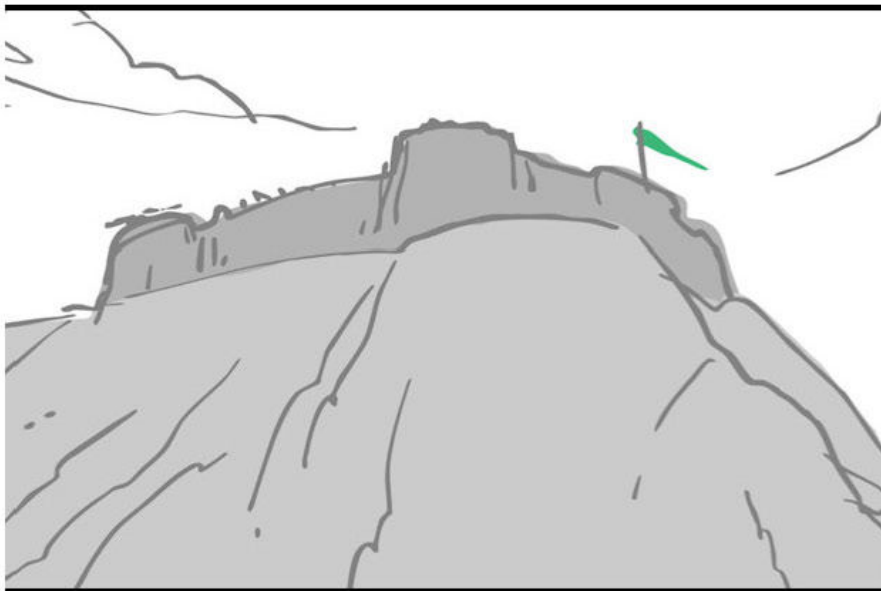
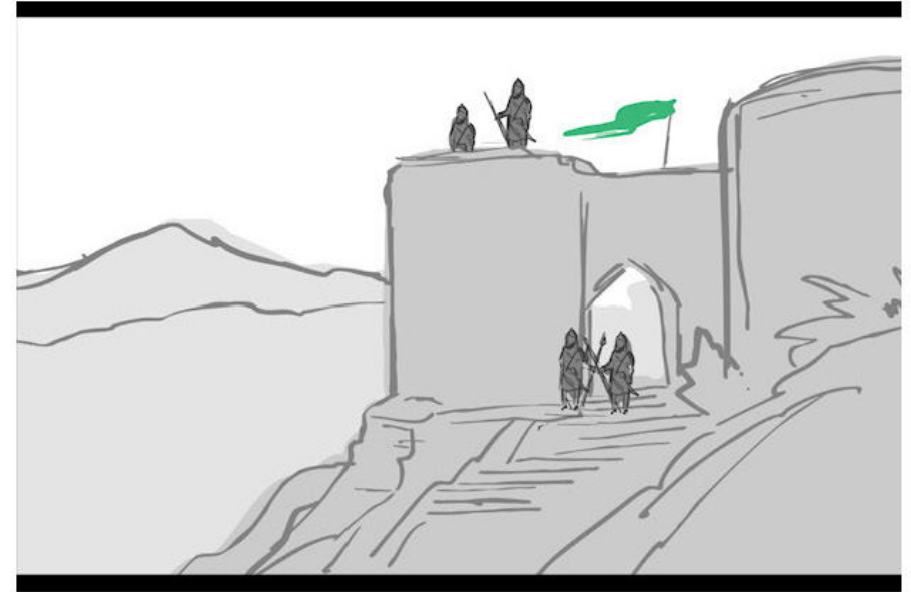


Realizing their commander Tanaji is dead; the Maratha soldiers began to flee the battle and scale down the anchored ropes from the turret. Tanaji's brother, Suryaji, who was second in command of the army took charge; he cut the ropes off the cliff and ordered his men to either jump off the cliff and face death or fight in honor of your motherland and face death. While an honorable Maratha sardar in his 70s, Shelar Mama, took upon Udaybhan and killed him, the other Maratha soldiers fought back in resilience till the fort was recaptured. Without a leader, the Mughal army was crumbled; many flee to Pune while the others were taken as prisoners in the fort.

As a sign of victory, stacks of hay was put to burn to create smoke, a signal sent back to Shivaji, who was stationed at Pune eagerly awaiting news from the Kondhana fort. When Shivaji heard about the loss of his friend and army commander Tanaji, whom he regarded as a fierce Lion, he said, "Gadh aala pan sinha gela" [the fort is captured but the lion is dead]. In honor of Tanaji's sacrifice on the battleground, the Kondhana fort became the Sinhagad fort thereon.

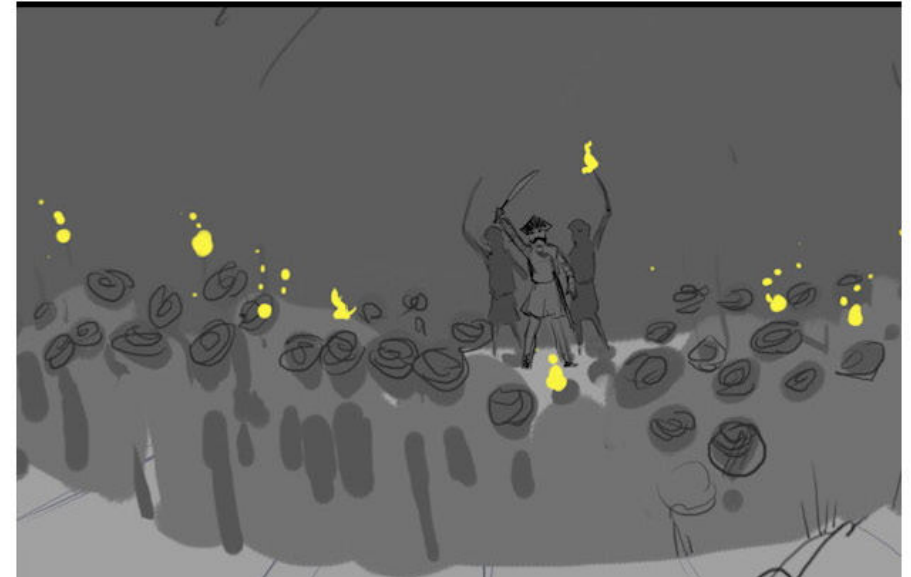
Phase I: Trailer: The Storyboard

Excerpts from the storyboard for the in-game cinematic



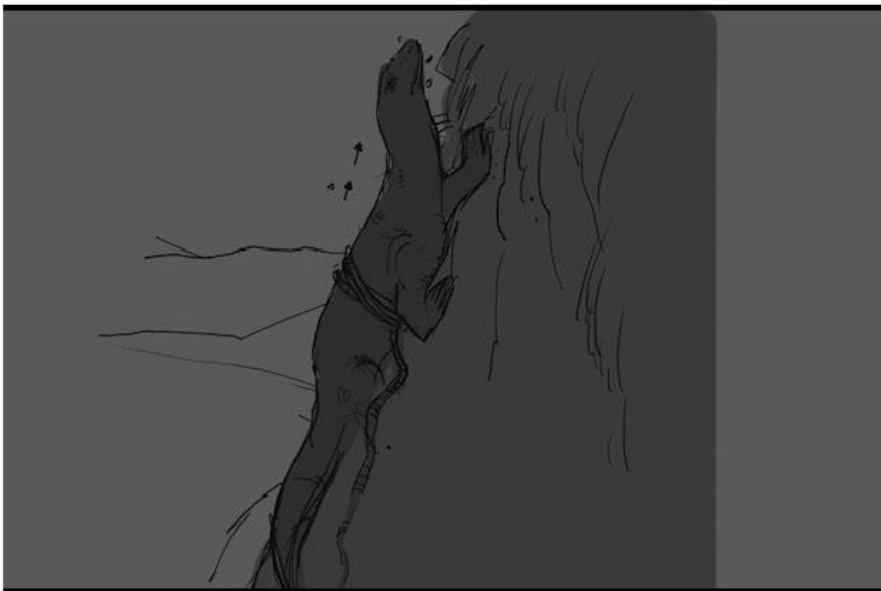
Phase I: Trailer: The Storyboard

Excerpts from the storyboard for the in-game cinematic



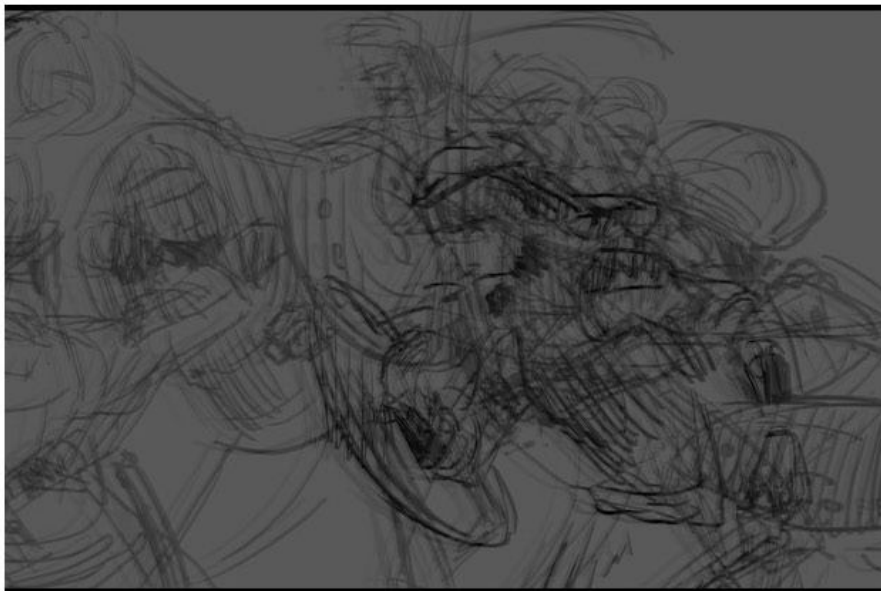
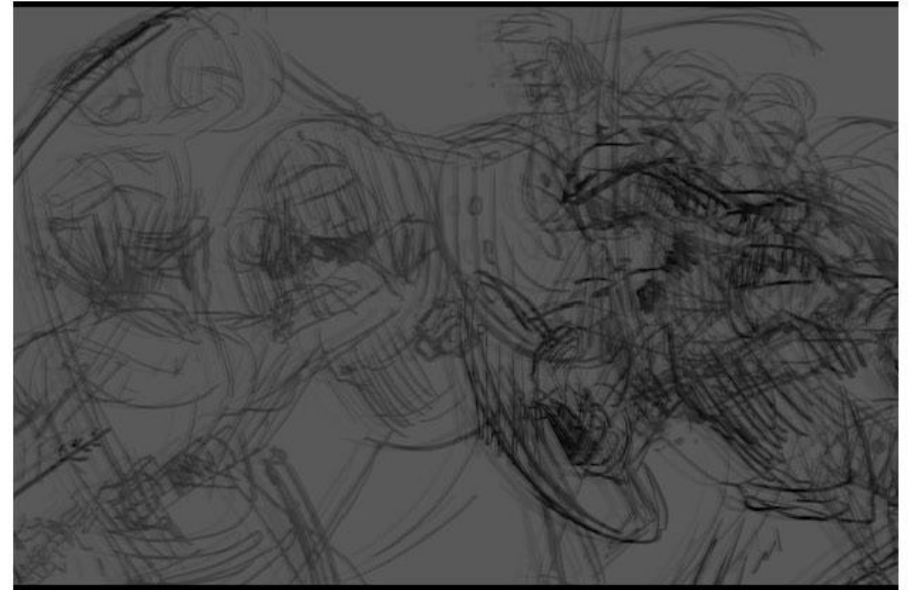
Phase I: Trailer: The Storyboard

Excerpts from the storyboard for the in-game cinematic



Phase I: Trailer: The Storyboard

Excerpts from the storyboard for the in-game cinematic



Phase I: Trailer: The Shot Breakdowns

Sr	Transition	Time/ Day	Location	Shot	Visual	Duration [Seconds]
1	Fade In	Day	Outdoor, Sinhagad Fort	Mid shot	Mughal guards at Pune Darwaza	5
2	CutTo	Day	Outdoor, Sinhagad Fort	Mid Shot	Mughal guards at Kalyan Darwaza	5
3	CutTo	Day	Outdoor, Sinhagad Fort	Long Shot	Reveal Sinhagad fort with the Mughal flag fluttering over it	5
4	Zoom Out	Night	Indoor Shivaji's Palace	Mid Shot	Fort's reflection in Jijabai's eye	2
5	Zoom out	Night	Indoor Shivaji's Palace	Mid Shot	Reveal Shivaji out of focus, focus shifts to Shivaji looking at jijabai	3
6	Jump Cut	Night	Indoor Shivaji's Palace	Over the Shoulder of Shivaji	Shivaji addressing his courtsmen. Tanaji, Suryaji and Shelar Mama seen in the background	1
7	Zoom in over the shoulder	Night	Indoor Shivaji's Palace	Mid Shot	Tanaji pulls out his sword showing his acceptance of the mission and other courtsmen cheer along	2
8	Jump Cut	Night	Outdoor Base camp	Mid Shot + Slow Track back	Tanaji addressing his troops	3
9	CutTo	Night	Outdoor Base Camp	Close Up	Monitor Lizard hissing	2
10	CutTo	Night	Outdoor Base Camp	Mid Shot	Two hands tying a rope around the Lizard's waist	2
11	Jump Cut	Night	Outdoor Steep Cliff	Mid Shot	Lizard climbing the cliff towards the fort's turret	2
12	CutTo	Night	Outdoor Fort's turret	Top Shot	Lizard coming towards the camera with the rope tied to its waist and the soldiers start climbing the rope	3
13	CutTo	Night	Outdoor Sinhagad Fort	Travel Shot	Soldiers of both the armies engaged in a battle and the camera hovers overlooking the scene. Swords clinging, blood splattering, soldiers collapsing, war in action.	10
14	Pause	Night	Outdoor Sinhagad forF	Overlooking Travel shot + Pause	Moment the camera reaches Tanaji, Udaybhan stabs him in the chest and Tanaji collapses	5
					Freeze Frame	5
					"Name of the Game" + Coming Soon...	
Total Time						55 Sec

Phase I: Trailer: The Animatic and Sound

The Animatic

The Animatic is the storyboard, approximately 55 seconds in duration and timed to the Soundtrack. Sequences from here will be used as cut scenes in the game.

The Sound

Intro (00:00 – 00:20)

Voice Selection: Strings Ensemble Arabic Vocals (Solo)

The Arabic vocals were used to establish the historical space of the scene as well as the perspective of the story. Which in this case is the Mughal Fort. As the story progresses, the perspective shifts to that of the Marathas. The strings section rising, highlights the tone of determination of the Marathas to take back the once lost fort. The ascending strings syncs with the camera shift to Shivaji with a sudden drop in the dynamic of the score, as punctuation in the sound, to allow space for the next phase to begin.

Prep for War (00:22 – 00:36)

Voice Selection: Percussion (Dhol) Bass Halgi (percussion folk)

After the pause with a sync point where Tanaji accepts the mission, the drums kick in which is the beginning of the build up towards the War. This Drum is assisted with a rhythmic bass, which not only aesthetically complements the drums but also adds to the anticipation of the events to follow. Here with the sync point of the monitor lizard scaling the cliffs comes in the Halgi, which adds to the build up and gives a sense of haste to the action in the story where the soldiers now scale the cliffs.

War (00:37 – 00:50)

Voice Selection: Strings Section Brass Section Percussion (All)

Here the score is dynamically at its highest point, where the strings section along with the brass sections gives the 'big' sound to the score assisted by every layer of the percussion to add as much punch as possible to the war scene.

Title and End (00:50 – 01:05)

Voice Selection: Percussion (Dhol) Bass

Here the music syncs with the stabbing of Tanaji pulling the score to a sudden stop with the war theme and into a more passive state with just the Percussion and bass playing with added melodic layers for cinematic effect.

Phase I: Trailer: The Environment

I have taken references for the environment from the following sources:

My personal visit to the Sinhagad Fort

TV series: Bharat Ik Khoj

Internet research



Phase I: Trailer: The Environment



Phase I: Trailer: The Environment

I am trying to keep the environment of the game as authentic as it would have been, during the Battle of Sinhagad, and also keeping in mind how the fort, the topography of the region and the escalation of the cliff, etc. looks today.

Since this is an educational game, my intention of creating an authentic environment will help the gamer experience the fort virtually in first person. This will encourage him to explore the fort and get familiar with it so that he can relate back to his gaming experience and educational learning when he actually visits the place.



Based on these references, I have been working on designing 3D models for the architecture of the fort and the maps for the game.

Phase I: Trailer: Characters: Tanaji Malusare



I have taken references for characters from the following sources:

- Popular Marathi play: Janata Raja
- TV series: Raja Shiv Chhatrapati
- Statues and installations at Sinha-gad Fort
- Comic books by Amar Chitra Katha
- Animation film by Fountain Learning
- Internet research

Based on these references, I have been working on designing 3D models for these characters for the game. P.S. These are subject to iterations.

Phase I: Trailer: Characters: Tanaji Malusare



Phase I: The Trailer

The trailer is under production and some sequences from the main animation will be presented on the day of Jury.

References

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Video reference:

Several talks by Babasaheb Purandare - <https://www.youtube.com/watch?v=77Nbo25BL3k>
TV Series - Bharat Ik Kjoj - <https://www.youtube.com/watch?v=2nem1KyUkJ4>
TV Series - Raja Shiv Chatrapati - <https://www.youtube.com/watch?v=w9lmUzrzFyg>

Other references:

Books - Amar Chitra Katha

Personal interviews and chats with Historians and noble scholars in Maratha literature