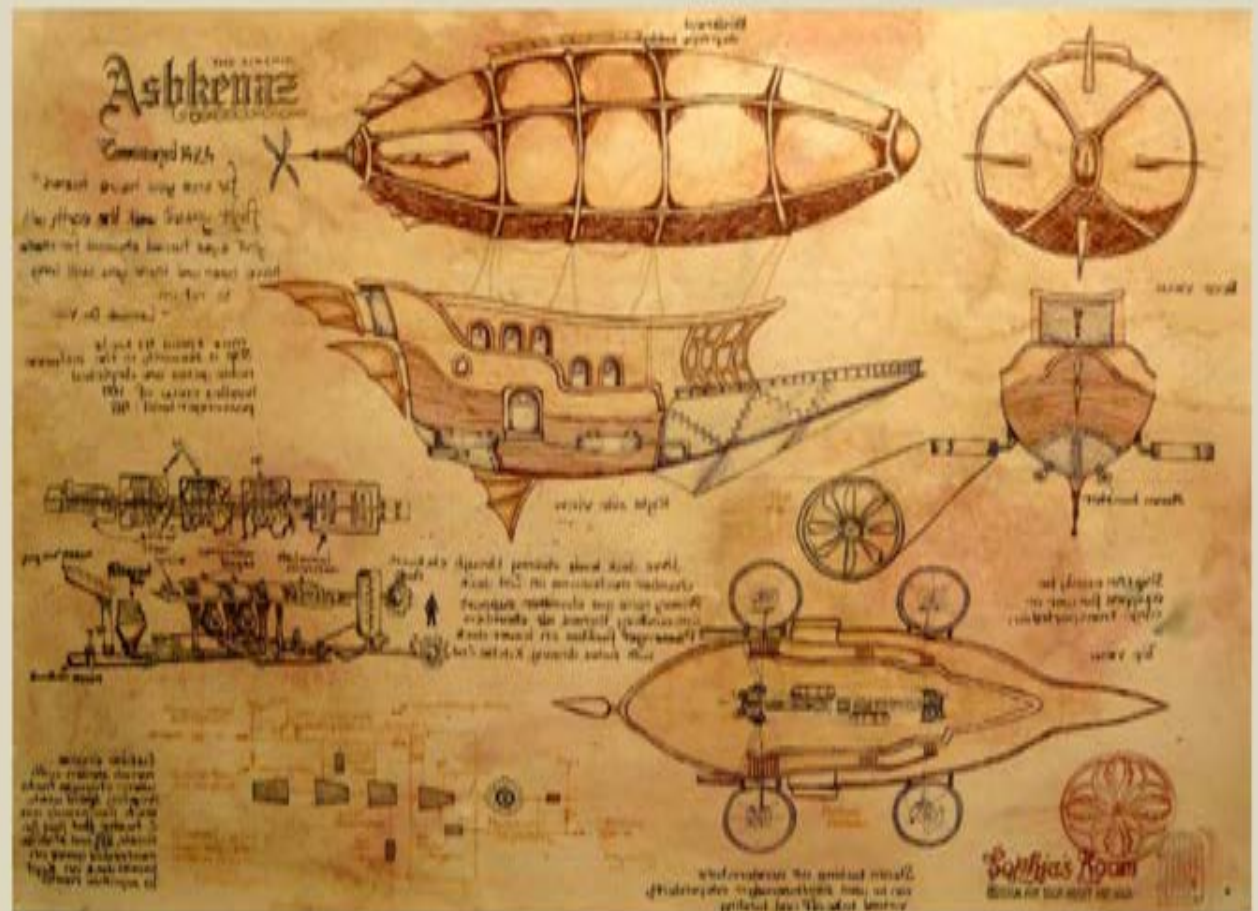
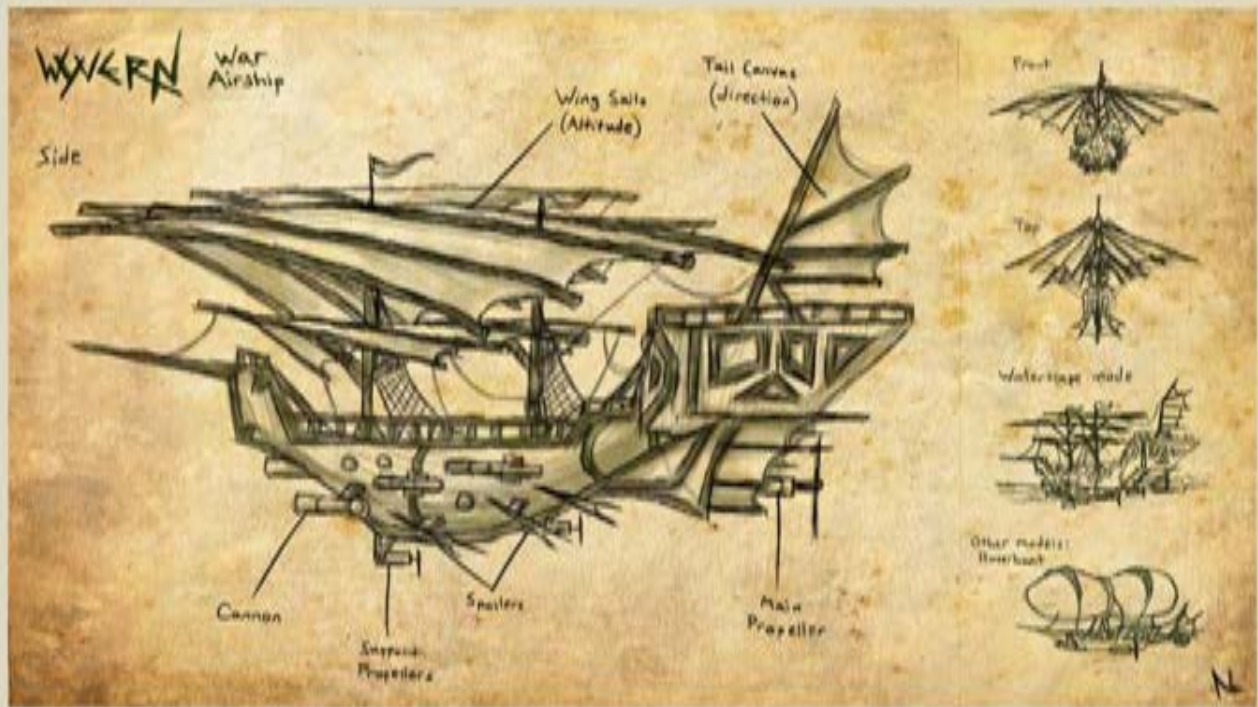


# THE AIRSHIPS



**BY:**

**Arjumand-Bano**

**The Airships**

**By Arjumand Bano (13005001010)**

**Research Supervisor: Sir Kalim- Ur- Rehman**



**A Research Project**

**Submitted to Aviation Management**

**In Partial fulfillment of requirement of**

**Degree of Aviation Management**

**Department of Institute of Aviation Studies**

**University of Management and Technology**

**Johar Town, Lahore**

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# Preface

**T**his project “The Airships” is done as a part of BS Aviation Management which has to be done in last semester in University of Management and Technology, Lahore.

I am glad to dedicate this project to Sir Kalim- Ur- Rehman which is project supervisor and without their guidance this project cannot be done competently. I am thankful to my parents and teachers who guided me in this project.

For preparing the project I studied different websites related to airships. The data related to airships is easily available on internet. The research is based on airships types, its history, construction, biographies, modern airships etc. I tried my level best to put maximum information related to airships and keep the project from inaccuracies. If this project can help anyone to increase his/her information and knowledge I will feel that the purpose of my hard work has been achieved.

# Acknowledgement

It is genuine pleasure to express my deep sense of thanks and gratitude to supervisor Sir Kalim- Ur -Rehman. Their keen interest and dedication above all their overwhelming attitude to help their students had been solely and largely responsible for completing my work. Their scientific approach and timely advice have facilitated me to a very great extent to accomplish task.

I also thank all the staff of BS Aviation Management for their kind help and cooperation throughout my study period.

I am thankful to my parents for their constant encouragement throughout my research period and I believe that this project will guide the readers who are not even aware from airships.

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# Declaration

I hereby declare that the project work entitled “The Airships” submitted to University of Management and Technology, Lahore is a record of an original work done by me under the guidance of Sir Kaleem Ur Rehman and this project is submitted in the partial fulfillment of requirements for the award of degree of BS Aviation Management. The results embodied in this project have not been submitted to any other institute or university for the award of any degree or diploma.

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Arjumand-Bano

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# Executive Summary

**A**irships are poorly understood and very ancient aircraft. It uses buoyant gas usually helium to lift its structure. They have been around from the time 1852 but their commercial use was in 1920's and 1930's. Today they are performing limited roles such as scientific research and advertising. Once they were used for heavy cargo transportation, survey and in anti-submarine war.

Most famous of them were rigid airships used as flying aircraft carriers, heavy bombing and also for luxurious transportation. They become a tool of terror by 1915 and after Great War they were used as transportation for wealthy passengers. After the crash of Hindenburg in 1973 people considered airships unsafe. Now they become seen as old technology.

The project is structured in 17 Chapters.

Introduction, History, The interwar period, Airship Biographies, Terminology, Classification, Construction, Modern Airships, Current design projects, comparison with heavier than air aircraft, Safety, passenger experience, Airship

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travel Brochure, Famous flights, The Hindenburg disaster, The Hindenburg film, Karachi's airship hanger and at the end conclusion.

# *Chapter 1*

## Introduction

**H**istory of flight is from history of dream. Human wants to fly like bird. Early myths related to flight and early attempts include fashioning wings out of bird's feather. At ancient times it was thought that the mechanism of bird flight was more difficult than it seems.

Until 20<sup>th</sup> century clear understanding of bird flight was not accomplished. The issue was related with the posthumous publication of Borelli in 1680. Giovanni Alfonso Borelli's *De Motu Animalium* described that human muscular system is too weak to support system like bird's flight as they twist and turn during flying and complex flapping of wings.