

Assignment no.1 Report

WAD-Cs 324

April 22,2025

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Tatheer Zahra

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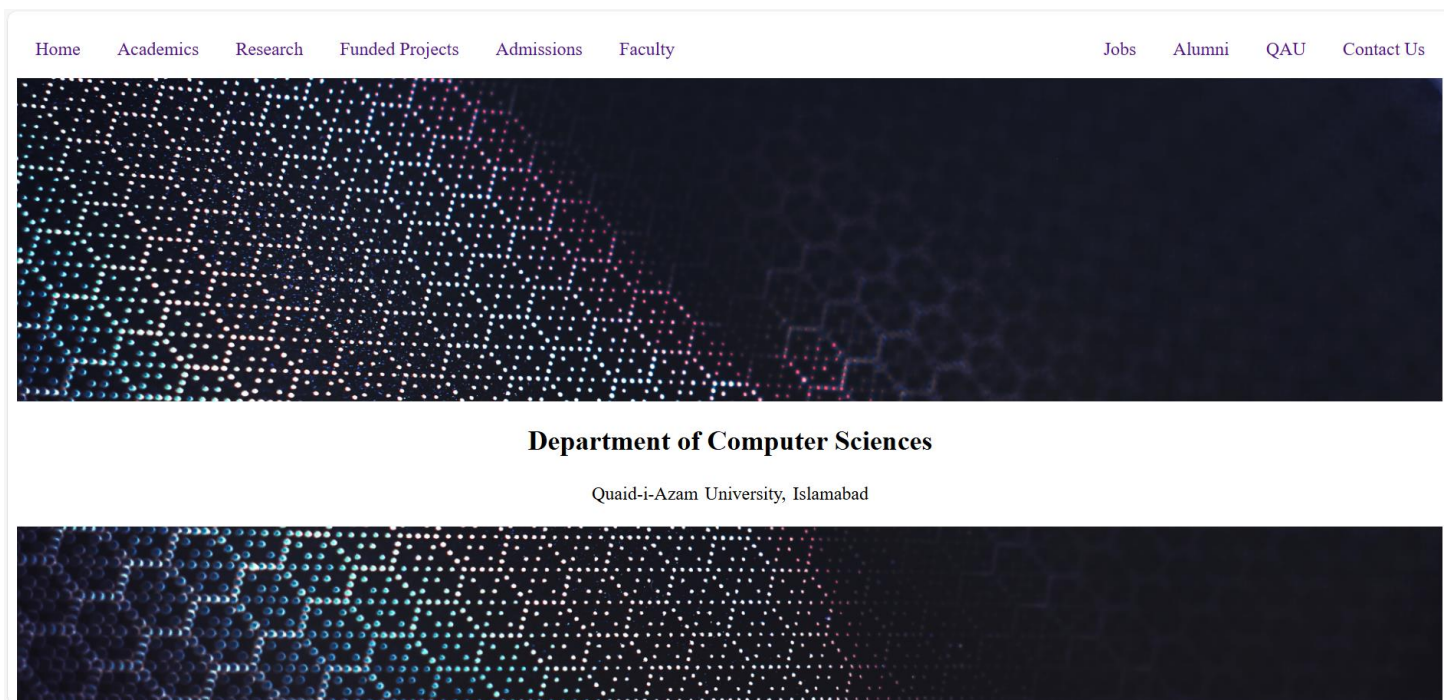
Dr. Rabeeh Ayaz Abbassi

Overall Color scheme:

- --primary-color: rgb(23, 23, 90) (Dark Blue)
- --sec-color: rgb(0, 0, 255, 0.2) (light lavender)
- --sec-color2:white (white)

Header:

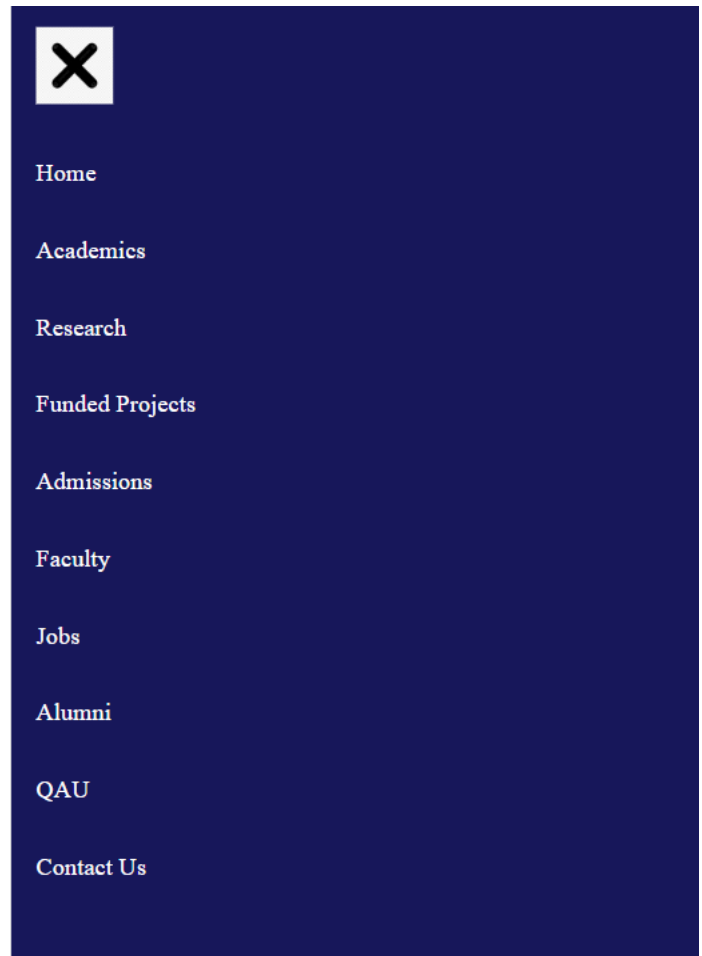
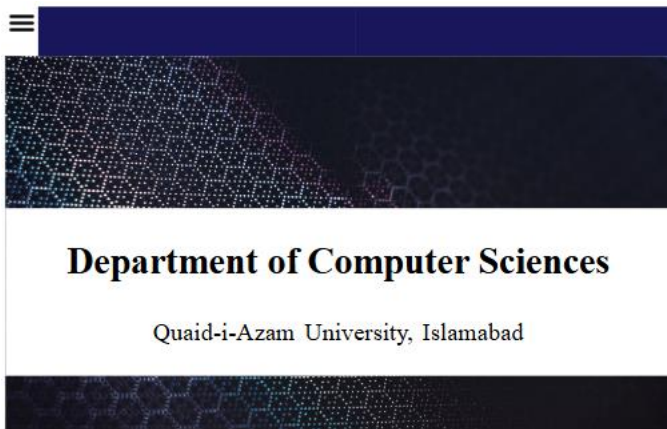
The header is designed as per motivation form some of the templates of WordPress.



Simply a div with two sub-divs for making groups of tabs.

And the text heading is placed by using position attribute.

For Smaller screens the ham-menu is designed.



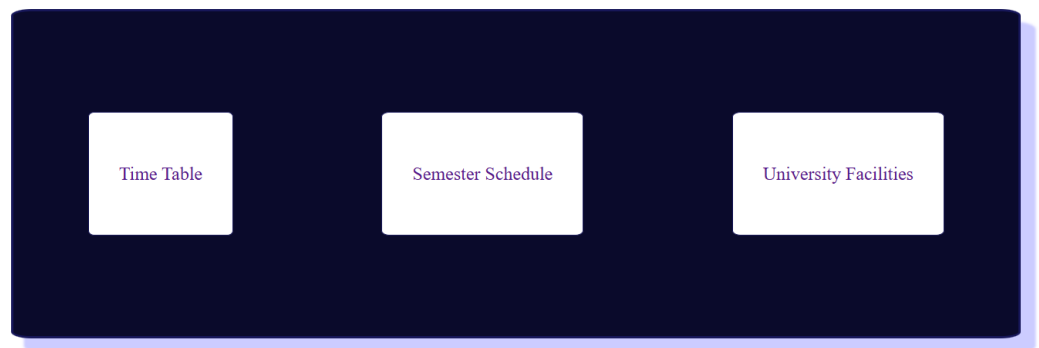
I used the CSS technique for the ham-menu as soon as the ham-menu icon hovered. A div displayed with 100 vw and 100 vh with tab links and remain displayed as long as that ham-menu div is being hovered. Added a close-icon ,which takes back to the same tab.

Home page

Important Documents



Important Documents

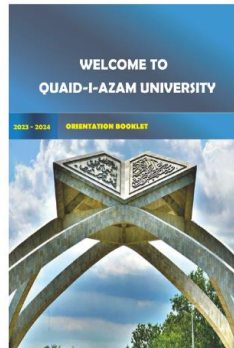


- The first section of the home page is important documents whose display is set to flex with row direction for larger screens and column direction for smaller screens. Simply use a div with anchor tags which are scale by 2 when hovered.

Latest News



Quaid-i-Azam University in "Computer Science and Information Systems" ranked 301-350 worldwide and third nationally by QS Rankings 2025



QAU Orientation Booklet 2023-2024 has been published.



Seminar on Entrepreneurial and Growth Dynamics in the Tech Landscape by Usman Asif, CEO, DevSinc

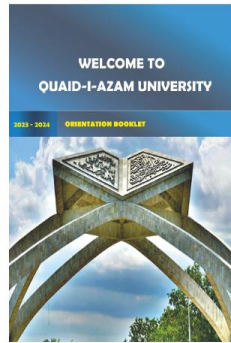


Students from CS Dept got first positions in On Spot Programming and Hackathon competitions in the 8th ExclTe Cup organized by CUST, Islamabad

Latest News



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- The next section is of latest News, which is displayed using grid layout `img`, `div` for caption and `div` for dark border. When any of the sections are hovered it is scale and the `img`'s display is set to `none`, and the caption is only displayed. For smaller screens the grid is designed as 2 rows and 2 columns.

Introduction

The Department of Computer Sciences at Quaid-i-Azam University is considered as one of the best computer science departments in Pakistan. The department is ranked among the top 3 departments in the country as per QS and Times Higher Education (THE) rankings. It was established at Quaid-i-Azam University Islamabad in 1976. The main objective of the department is to produce Computer Scientists in order to meet the growing demand for computer professionals in the country. All the programs have been highly successful. Department graduates have attained higher degrees from developed countries and are working in national and international organizations. The department offers PhD (Computer Science), MPhil (Computer Science), MS (Information Science & Technology), MS (Data Science), and BS (Computer Science) degrees. Each degree program has a specific objective and focus. The course of study and syllabus for each degree is updated and is inline with its objectives.

- The comes the Introduction section which consists of a div and a heading which is centered midway using position attribute.

Research



Human Information Interaction

Investigates all aspects of information usage by humans. Research focus varies for information seeking behavior, Information Interaction Techniques, Storage and Retrieval models/frameworks for structured and unstructured information, and information services for human information needs



Knowledge Engineering

Focuses on analyze of data, metadata and knowledge using supervised and unsupervised mining algorithms. The target areas will be software architecture, web services and overlay networks. The main goal is to process related and uncorrelated facts and extract meaningful contextual knowledge for quality decision making.



Networking and Communication

This group investigates the applied aspects in the domains of networking, communication, security and privacy. The research group focuses on a number of areas including but not limited to computer networks, distributed systems, mobile Agent-based distributed systems, routing protocols, peer-to-peer computing, security and privacy.

- The last section of Home page is research which is designed so using flex box with row-direction and

each research section is also displayed by flex with column direction .

Academics page:

- The academic's page is designed with an intro div which is styled using the same container as done using for home page intro div.



Academics

The department offers PhD, MPhil, MS (IST), M.Sc. and BS degrees

Each degree programme has a specific objective and focus.

The course of study and syllabi for each degree is updated and is inline its objectives.



Academics

The department offers PhD, MPhil, MS (Information Science & Technology), M.Sc. and BS degrees. Each degree programme has a specific objective and focus. The course of study and syllabi for each degree is updated and is inline its objectives.

- Then each program's div styled using flex box for aligning the img and para in a row with a “more detail” link that opens the tab of that program.

- Then courses details using details and summary tag for making a dropdown effect for the details of courses.

PhD Courses

▼ CSC-815: Neural Information Retrieval

Information retrieval fundamentals, information retrieval evaluation, word representational learning, word embeddings, language modeling, Word2Vec, FastText, word embeddings in information retrieval, query expansion with word embeddings, application to patent retrieval, neural networks, neural network methods in NLP, Sequence Modeling with CNNs (Convolutional Neural Networks) and RNNs (Recurrent Neural Networks): modeling word n-grams with CNN, hierarchical CNNs, recurrent neural networks, simple RNN, RNN as Encoder, LSTM, LSTM gating mechanism, encoder-decoder architecture, attention mechanism, encoder-decoder, and attention, Transformer and BERT: transformer architecture, contextualization via self-attention, transformer – positional encoding, masked language modeling, BERT, and extractive question answering, Neural Re-ranking: text-based neural models, properties of neural IR models, neural re-ranking models, re-ranking evaluation, KNRM (Kernel based Neural Ranking Model), and convolutional KNRM, Transformer Contextualized Re-ranking: web search with BERT, Re-ranking with BERT, splitting BERT - PreTTR and ColBERT, transformer-kernel ranking, TK (Transformer-Kernel) ranking, TKL (Transformer- Kernel for Long documents) and a hybrid approach IDCM (Intra-Document Cascade Model), domain specific information retrieval applications, Dense Retrieval Models – Knowledge Distillation: neural methods for IR beyond re-ranking, dense retrieval, dense retrieval and re-ranking, dense retrieval lifecycle, BERTDOT model, nearest neighbour search, nearest neighbour search – GPU brute-force, approximation of nearest neighbour search, knowledge distillation, DistilBERT, distillation in IR, deep learning based recommender systems.

- ▶ CSC-816: Medical Image Analysis
- ▶ CSC-817: Transfer Learning and Applications
- ▶ CSC-818: Advanced Computer Vision

- Then a div containing FAQs.

(Note: Same styling pattern for all the academic programs.)

- ## Funded Projects Tab

Funded Project

Project Title: Optimal Route Planning using Artificial Intelligence for last mile Delivery Services: A case of Intelligent Transport System (ORPAI)

PI: Dr. Khalid Saleem
 Co-PI: Ms. Hina Ali (NUML)
 Students: 1 MPhil, 2 BS(CS), 1 Software Engineer
 Funding Amount: PKR 9.3 Million
 Funding Agency: National Centre in Big Data and Cloud Computing (NCBC), HEC
 Duration: 1.5 Years
 Start Date: January 1, 2021
 End Date: June 30, 2022

Project Title: Optimizing Model Inference and Coverage in Learning-based Testing (OMICoLT)

PI: Dr. Muddassar Azam Sindhu
 Co-PI: Dr. Onaiza Maqbool
 Graduate Students: Farah Haneef (PhD student), Hafiz Abdul Quddus (MPhil Student for 1st Year of Project)
 Funding Amount: PKR 2.1 Million
 Funding Agency: HEC
 Duration: 3 Years
 Start Date: July 1, 2020
 End Date: June 30, 2023

Admission Tab

- For admission using an intro class container div with heading and imp links and details for each Programme.

PhD (Computer Science) - Every Semester

PhD is the highest degree awarded in an academic discipline and it is the most satisfying and rewarding educational experience. In our PhD programme, students work closely with a faculty member, performing original research, and tackling challenging and unsolved problems.

Admissions Requirements:

Students will be selected on the basis of scholarship and research potential among applicants with appropriate degrees from HEC recognized university as per university rules.

The minimum requirements for admission are:

- MPhil (Computer Science or computing related discipline) or
- MS (18 years Education) with Computer Science or computing related discipline
- Must pass the test and interview arranged by the department

[Admission Notice](#)

[Click here to see more details about the programme](#)

Faculty Tab

- Faculty Tab opens up with an image(only for larger screens) which is given a border of primary color and is centered using flex box property for container div.

A div for caption of pic which is position at the bottom using position attribute.



Our Respected Faculty

- Design faculty profile cards which provide link to Faculty profiles and are displayed per 2 columns using grid layout for larger screens and in a single column using flex box layout for smaller screens.

Faculty Profiles

Dr. Onaiza Maqbool

Professor

Research Interests

- Software reengineering
- Software architecture recovery
- Program understanding
- Machine learning

✉ oniaza at qau dot edu dot pk

☎ +92-51-9064 2060

Dr. Khalid Saleem

Associate Professor

Research Interests

- Database Systems, Information Systems
- Distributed Systems
- Data Warehousing/Mining

✉ ksaleem at qau dot edu dot pk

☎ +92-51-9064 2061

Faculty Profile Tab

Onaiza Maqbool

Professor (Tenured)

HEC Approved Supervisor

✉ onaiza-at-qau-edu-pk

☎ +92-51-9064-2060

🏢 Dept. of Computer Science,
Quaid-i-Azam University, Islamabad, Pakistan

📄 [Google Scholar](#) [DBLP](#) [Research Gate](#)

[Research Publications](#) | [Funded Projects](#) | [PhD Students](#) | [MPhil/MS Students](#) | [BS/MSc Students](#)

Research Interests

- Software (Re)Engineering
- Software Architecture Recovery
- Machine Learning



- Faculty profile tabs are designed using an intro class container with heading and all the details are displayed within that div.

Contact Us tab and Footer

A div which has iframe for map which is bordered using primary color and the p element for contact details. These elements are displayed using flex layout and are spaced using space-between attribute.

