

INFORMATION BR O R MATION CHURE



**Diploma & Post Diploma in
Land Surveying, Water Resources & Geophysics**
(Based on industry needs & requirements)

Aqua Foundation Academy

(an entity of Aqua Foundation, registered under Societies Act 1956)

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From the Desk of Chairman, Aqua Foundation

Greetings from Aqua Foundation,

In India water resources and geophysics education is mostly associated with earth sciences discipline. Geophysics course is available only at post graduate level, covering all the aspects of geophysics, including water. A strong need was therefore felt of courses dedicated to ground water geophysics and water management. Aqua Foundation Academy has introduced various specialized courses in the water sector, at Certificate, Diploma and PG Diploma levels, in order to meet the long felt need for skilled manpower in this field. The present programs are the gateway for the upward growth of our young persons, desirous to pursue their career objectives in the field of water.

Similarly land surveyor education is mostly associated with civil engineering discipline. Most of the surveyors have informal education, through work experience, restricting their growth option. AF Academy has introduced Certificate, Diploma and Degree Level courses in Land Surveying in order to meet the long felt need for skilled manpower in this field. The present programs are the gateway for the upward growth of our young persons, desirous to pursue their career objectives in the field of surveying.

Recognizing the need for courses duly recognized by Government, Aqua Foundation to offer various diploma and post diploma courses through regular mode of education. These courses are for candidates desirous of studying in regular mode to obtain government recognized qualifications for their career objectives.

Aqua Foundation is also offering various Certificate, Diploma and Post Diploma courses through online learning mode, for candidates desirous of updating their skills while already pursuing a career. These courses are also open to foreign students. The offered courses are conducted in online learning mode coupled with practical field training on actual live projects. This gives an opportunity even to already employed people to enhance their skill sets and have better growth options. The students of these courses are imparted theoretical and practical knowledge of all the related subjects. The institute provides classroom/ online support and field training. By enrolling in these courses a student can complete the studies in online learning mode, and by attending the field training for a specified duration.

Water, Geophysics and Land Survey are few of the most important subjects in times to come, and these professionals are going to be in great demand in private and public sector. Through these programs we strive to prepare our students to become contributors to society in all respect. You will learn how to think logically, deal with uncertainty, apply technology in a socially and environmentally responsible manner, communicate effectively and collaborate with others and deliver the results.

With these words I welcome you to the fascinating world of contemporary education and wish you all the best in all your future endeavours

Dr. Sanjay Rana

Chairman

Aqua Foundation, New Delhi, India.



Training Programs:

The various modes of training are as under:

Executive Development Program:

- These programs are meant for senior level officers to introduce to them latest techniques and concepts. These are not the programs imparting training to participants, but only making them aware of latest tools available for optimum utilization of resources. This knowledge will help them incorporate latest technologies and tools while making policy and taking strategic decisions.
- **Duration:** 1 to 3 days

Training Program for Operation Level:

- These programs teach and train the participants on how to use a particular technique or how to perform certain tasks. These programs focus on one topic only e.g. Geophysical Techniques, Ground Water Modeling, particular software tool etc.
- **Duration:** 7 - 12 days

NGO/ Administrators Training programs:

- These programs have been developed for NGO workers and administrators to help them understand various social, economic, health and technical issues related to water resources, so that they can use their energy and resources in most productive manner. The design is flexible, combining topics of concern and interest for specific regions.

Certificate Courses:

- Certificate courses have been developed in various fields of water resources, preparing new candidates to take up specialized jobs, and also to empower practicing professionals in new, emerging areas in water sectors. Candidates can pursue their higher education in water and environmental studies after completing their certificate course. Jobs in this sector are available both in the government and private sector companies. There are some NGOs which also appoint candidates with a background in water & environmental studies for various operations. These courses are aimed at imparting knowledge in a specialized field in a short duration. The medium is through distant learning, with an online test at the end of the course.
- The certificate courses have been developed as modules, and a candidate can obtain a Diploma or PG Diploma (subject to minimum qualification) after completing a set of these certificate courses.
- **Duration:** 3 months.



Diploma Courses:

- Diploma courses have been developed in various fields of water resources, preparing new candidates to take up specialized jobs, and also to empower practicing professionals in new, emerging areas in water sectors. Candidates can pursue their higher education in water and environmental studies after Completing their diploma course. Jobs in this sector are available both in the government and private sector companies. There are some NGOs which also appoint candidates with a background in water & environmental studies for various operations. Diploma courses cover various aspects of a particular topic, divided in 4 modules (each module individually comprising of a certificate level course). The medium is through distant learning, with an online test at the end of the course.
- The diploma courses have been developed as collection of four modules, and a candidate can obtain a certificate at the end of successful completion of each module.
- **Duration:** 12 months.

PG Diploma Courses:

- PG Diploma courses have been developed in various fields of water resources, preparing new candidates to take up specialized jobs, and also to empower practicing professionals in new, emerging areas in water sectors. PG Diploma courses cover various aspects of a particular topic, divided in 8-10 modules and one project work. The medium is through distant learning, with an online test at the end of the course.
- **Minimum Eligibility:** Graduate from a recognized university
- **Duration:** 15 months + 3 months of Project Work.



About Aqua Foundation Academy

AFA is an entity of Aqua Foundation, registered under Societies act in year 1998. AFA provides training & knowledge sharing platform to decision & policy makers, working professionals, operating level personnel and aspiring students willing to specialize in technical sector. The broad objectives of AFA are:

- To organize specialized workshops for senior level officers of government departments (policy and decision makers) on latest technology developments, enabling them to be benefited by latest international research and development.
- To organize specialized workshops for scientists, engineers and technical personnel on specialized software, research, methodologies emerging in various fields.
- To organize specialized workshops on latest technologies.
- To organize workshops and training programs for NGOs, administrators, and other nonscientific personnel to enhance their scientific understanding helping them make better contribution in their chosen field of operations.
- To conduct Certificate, Diploma and PG Diploma courses for working and aspiring personnel for capacity building in various sectors where structured education gap exists.



Fast Track Programs (Online/Distance Learning Mode)

Apart from the regular courses in association with MBU, Aqua Foundation is also offering various Certificate, Diploma and Post Diploma courses through online learning mode, for candidates desirous of updating their skills while already pursuing a career. These courses are also open to foreign students. The offered courses are conducted in online learning mode coupled with practical field training on actual live projects. This gives an opportunity even to already employed people to enhance their skill sets and have better growth options. The students of these courses are imparted theoretical and practical knowledge of all the related subjects. The institute provides classroom/ online support and field training. By enrolling in these courses a student can complete the studies in online learning mode and by attending the field training for a specified duration. Due to very nature of subjects covered under these courses, it is emphasized that these are not pure distance learning courses and do require field training as an important component. The courses are offered by Aqua Foundation Academy which also remains examining and certifying institute for these courses.



PG Diploma in Integrated Water Resources Management:

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: One year (Distance + Project Work)

Course Structure:

Key Elements

- Introduction to IWRM
- Water Transfers
- Water & Atmosphere
- Water & Land
- Water & Riparian Environment
- Water & Lakes
- Water Budget
- Project Work: 03 months

Dispatch of Study Material:

The study material will be sent to students once each semester, by speed-post/ courier. The assignments related to study material will be sent twice each semester, to be completed and sent back by the candidate within stipulated time period.

Fee Structure: Onetime fee payment of Rs 55,000/- USD 2,200

Or

Two Installments of Rs 30,000/- USD 1,200 each

The fee is inclusive of course material, dispatch expenses, assignments, evaluation of assignments and issuance of PG Diploma.



PG Diploma in Ground Water Geophysics:

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: One Year (Distance + Field Work)

Course Structure:

Key Elements

- Introduction to Geophysics
- Introduction to Hydrogeology
- Geophysical Methods- Electrical
- Geophysical Methods- Seismic
- Geophysical Methods- EM
- Geophysical Methods- GPR
- Geophysical Methods- TDEM
- Geophysical Methods- Gravity
- Geophysical Methods- Magnetic
- Practical Field Data Acquisition
- Practical Field Data Processing & Interpretation
- Use of Computer Software in Geophysical Data Interpretations
- Role of Geophysics in Groundwater Pollution Study
- Role of Geophysical Techniques in Environmental Management

Project Work: 03 months

Dispatch of Study Material:

The study material will be sent to students once each semester, by speed-post/ courier. The assignments related to study material will be sent twice each semester, to be completed and sent back by the candidate within stipulated time period.

Fee Structure: Onetime fee payment of Rs 55,000/- USD 2,200

Or

Two Installments of Rs 30,000/- USD 1,200 each

The fee is inclusive of course material, dispatch expenses, assignments, evaluation of assignments and issuance of PG Diploma.



PG Diploma in Geophysics:

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: One Year (Distance + Project Work)

Course Structure:

Key Elements

- Introduction to Geophysics
- Introduction to Geology
- Geophysical methods- Electrical
- Geophysical methods- Seismic
- Geophysical methods- EM
- Geophysical methods- GPR
- Geophysical methods- TDEM
- Geophysical methods- Gravity
- Geophysical methods- Magnetic
- Practical Field data acquisition
- Practical field data processing & interpretation
- Use of Computer software in geophysical data interpretations
- Role of geophysics in groundwater pollution study
- Role of geophysical techniques in environmental management

Project Work: 03 months

Dispatch of Study Material:

The study material will be sent to students once each semester, by speed-post/ courier. The assignments related to study material will be sent twice each semester, to be completed and sent back by the candidate within stipulated time period.

Fee Structure: Onetime fee payment of Rs 55,000/- USD 2,200

Or

Two Installments of Rs 30,000/- USD 1,200 each

The fee is inclusive of course material, dispatch expenses, assignments, evaluation of assignments and issuance of PG Diploma.



Diploma in Rainwater Harvesting & Artificial Recharge

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 12 months Distant learning mode.

Key Elements

- Certificate course in Hydrology
- Certificate course in Hydrogeology
- Certificate course in Artificial Recharge
- Certificate course in ground Water Geophysics

Fee Structure: Onetime fee payment of Rs 55,000/- USD 2,200

Or

Two Installments of Rs 30,000/- USD 1,200 each



Diploma in Water Geo-informatics

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 12 months distant learning mode.

Key Elements

- Certificate course in GIS
- Certificate course in Remote Sensing
- Certificate course in Surveying
- Elements of Geo-Informatics Including Computers, Geography, Digital Mapping and Cartography.

Fee Structure: Onetime fee payment of Rs 55,000/- USD 2,200

Or

Two Installments of Rs 30,000/- USD 1,200 each



Diploma in Enhancing Water Use Efficiency

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 12 months Distant learning mode.

Key Elements

- Certificate course in Enhancing Water Use Efficiency in Urban Sector
- Certificate course in Enhancing Water Use Efficiency in Rural Sector
- Certificate course in Enhancing Water Use Efficiency in Agriculture Sector
- Certificate course in Enhancing Water Use Efficiency in Industrial Sector

Fee Structure: Onetime fee payment of Rs 55,000/- USD 2,200

Or

Two Installments of Rs 30,000/- USD 1,200 each



Diploma in Surveying

Eligibility:

- Minimum 20 years of age
- 10+2 with at least one year of surveying experience.

Duration: 12 months distant learning mode with 03 months field training.

Key Elements

- Communication for Land Surveyors
- Computer Aided Design
- Survey Software
- Introductory Geology
- Computing Systems
- Land Administration
- Civil Drawing
- Soil Properties
- Land Surveying
- Cadastral Surveying
- Engineering Surveying
- Geodetic Surveying
- Subdivision Design Services
- Subdivision Design Concepts
- Contract Administration
- Resource Consents
- Geographic Information Systems

Fee Structure: Onetime fee payment of Rs 55,000/- USD 2,200

Or

Two Installments of Rs 30,000/- USD 1,200 each

Students need to bear cost towards travel and other expenses towards field training.

The training will be provided free of cost.



Certificate course in Hydrology

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 3 months distant learning mode.

Key Elements

- History of Hydrology
- Hydrologic Cycle
- Branches of Hydrology
- Hydrologic Measurements
- Hydrologic Prediction
- Statistical Hydrology
- Hydrologic Modelling
- Hydrologic Transport
- Applications of Hydrology

Fee Structure: Onetime fee payment of Rs 15,000/- USD 600



Certificate course in Isotope Hydrology

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 3 months distant learning mode.

Key Elements

- Introduction to Hydrology
- Introduction to Isotopes
- Introduction to Isotope Hydrology
- Application areas of Isotope Hydrology
- Current use and practices

Fee Structure: Onetime fee payment of Rs 15,000/- USD 600



Certificate course in Hydrogeology

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 3 months distant learning mode.

Key Elements

- Introduction to Hydrogeology
- Groundwater system and Geologic Processes
- Hydraulic Head, Porosity, Water Content, Hydraulic Conductivity, Specific Storage, Specific Yield And Aquifer System
- Water Level Monitoring And Hydrograph Preparations
- Hydrogeological Investigations for Bore Well Drilling in Different Hydrogeological Terrain.
- Determination of Aquifer's Parameters.
- Quality of Groundwater and Contaminant Transport Properties
- Governing Equations and Calculation of Groundwater Flow
- Brief on Numerical Groundwater Modelling
- Brief on Analytic Groundwater Modelling
- Hydrogeological Investigations for Selecting Artificial Recharge Sites
- Groundwater Resources Estimations.
- Groundwater and Related Geotechnical Problems

Fee Structure: Onetime fee payment of Rs 15,000/- USD 600



Certificate course in Ground Water Geophysics

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 3 months distant learning mode with one field session for 15 days

Key Elements

- Introduction to Geophysics and Hydrogeology
- Application Area of Geophysics
- Present Status of Ground Water Geophysics in India
- Geophysical Tools for Ground Water Exploration
- Advanced Techniques for Ground Water Exploration
- Principle and Applications of Electrical Tomography for Groundwater Investigations
- Principle and Applications of Seismic Techniques for Groundwater Investigations
- Principle and Applications of EM Techniques for Groundwater Investigations
- Principle and Applications of Ground Penetrating Radar for Groundwater Investigations
- Principle and Applications of Magneto Telluric for Groundwater Investigations
- Principle and Applications of TDEM for Groundwater Investigations
- Principle and Applications of Gravity & Magnetic Techniques for Groundwater Investigations
- Role of Geophysics in Groundwater Pollution Study.
- Role of Geophysical Techniques in Environmental Management
- Field Training and Demonstrations of Geophysical Techniques.
- Field Data Acquisition and Field Data Interpretations

Fee Structure: Onetime fee payment Rs 20,000/- USD 800

Students need to bear cost towards travel and other expenses towards field training.

The training will be provided free of cost.



Certificate Course in Artificial Recharge to Groundwater

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 3 months distant learning mode.

Key Elements

- Introduction to Hydrogeology
- Need for Rainwater Harvesting & Artificial Recharge Processes
- Site evaluation methods like
- topographical Surveys
- Hydrometeorological Studies
- In-Situ Precipitation, Rainfall Pattern, Evaporation Losses and Climatologically features etc.
- Hydrological Studies
- Runoff Pattern, Drainage Pattern etc.
- Soil Infiltration Studies
- Geochemical Studies
- Hydrogeological Studies
- Geophysical Investigations
- Engineering Design and Construction
- Rainwater Harvesting and Artificial Recharge Structures in Rural and Urban Area
- Selection of Suitable Structure for Artificial Recharge to Groundwater and Water Conservations.
- Importance and Details Regarding Size and Type of Filter Media
- Field Demonstration of Rainwater Harvesting Structures.
- Precautions in Implementing Rainwater Harvesting and Recharge Structures.

Fee Structure: Onetime fee payment Rs 15,000/- USD 600



Certificate Course in GIS

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline.

Duration: 3 months distant learning mode with 05 days practical class.

Key Elements

- Introduction to Concepts of GIS
- An Overview of GIS Industry & GIS Software
- Importance & Role of Use in Resource Management
- Concepts of Geology, Hydrology and Hydrogeology
- GIS Data Sources, Data Collection
- Data Formats & Standards
- Planning, Selection and Implementation of GIS

Fee Structure: Onetime fee payment Rs 15,000/- USD 600



Certificate Course in Remote Sensing

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline.

Duration: 3 months distant learning mode

Key Elements:

- Introduction to Remote Sensing
- Remote Sensing Data Acquisition
- Image Processing
- Display and Scientific Visualization
- Microwave Remote Sensing
- Airborne Geophysics

Fee Structure: Onetime fee payment Rs 15,000/- USD 600



Certificate Course in Surveying

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline.

Duration: 3 months distant learning mode with 15 days practical training..

Key Elements

- Introduction to Surveying
- Coordinate Systems
- Levelling
- Use of Total Station
- Use of DGPS
- Basics of Map Preparation

Fee Structure: Onetime fee payment Rs 20,000/- USD 800

Students need to bear cost towards travel and other expenses towards field training.

The training will be provided free of cost.



Certificate Course in Enhancing Water Use Efficiency in Urban Sector

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 3 months distant learning mode.

Key Elements

- Physical, Social and Economical Dimensions
- Technological Aspects
- Environmental Aspects
- Water Use Efficiency in Domestic Sector
- Transportation and Distribution of Water
- Making Water & Wastewater Utilities More Efficient
- Process Automation and Operational Data Management
- Municipal Water Management
- Additional Resource Creation- Rainwater Harvesting, Recycling etc.
- Desalination and Related Technologies.
- Municipal Solid Waste Treatment
- Green Infrastructure- Need, Concepts & Principles.
- Technologies for Urban Sector

Fee Structure: Onetime fee payment Rs 15,000/- USD 600



Certificate Course in Enhancing Water Use Efficiency in Rural Sector

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 3 months distant learning mode.

Key Elements

- Physical, Social and Economical Dimensions
- Technological Aspects
- Environmental Aspects
- Multiple uses of Water Resources
- Water Safety Planning
- Sustainability of Water Systems
- Water for Livestock
- Drinking Water for Rural Sector- Meeting the Demand
- Reviving the Conventional Systems

Fee Structure: Onetime fee payment Rs 15,000/- USD 600



Certificate Course in Enhancing Water Use Efficiency in Agriculture Sector

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 3 months distant learning mode.

Key Elements

- Physical, Social and Economical Dimensions
- Technological Aspects
- Environmental Aspects
- More Crop per Drop- Agriculture Sector
- Emerging Irrigation Technologies
- Protected Cultivation Technology

Fee Structure: Onetime fee payment Rs 15,000/- USD 600



Certificate Course in Enhancing Water Use Efficiency in Industrial Sector

Eligibility:

- Minimum 20 years of age
- Graduate with science discipline either having Geology or Physics as one of the subjects. Graduates having other specialized qualifications related to water sector also can apply and their eligibility will be subject to approval by the institute.

Duration: 3 months distant learning mode.

Key Elements

- Physical, Social and Economical Dimensions
- Technological Aspects
- Environmental Aspects
- Performance Optimization and Efficiency Improvement in Industrial Sector
- Reuse, Recycling and Recovery
- Waste Water Handling
- Guidelines for Exploration and Resource Creation.
- Water Pollution & Quality Management

Fee Structure: Onetime fee payment Rs 15,000/- USD 600



Regional Offices & Study Centres:

All the candidates registered with AFA for any of the offered programs will be sent study material, in an easy to follow manner. Following are further supports provided to students:

1. Online Support: For candidates living in remote areas, online support will be provided through internet, to address to any issues they might face while following the study material.
2. Classroom Support: In major cities classroom support can be provided to students, subject to number of enrolments received from such cities. Nearest city for classroom support will be intimated to candidates at the time of enrolment.
3. Field Training: AFA works closely with organizations working in the field of water, geophysics and land survey and encourage all its students to join practical live projects throughout the country. Project work will further provide opportunity to associate with live projects.



**AQUA FOUNDATION
ACADEMY**
Fast Track Programs
(Online/ Distance Learning Mode)

Admission Form

Paste a latest
Colored passport
size
photograph
of candidate and
Attach 1 additional
Copy also

Course Details :

Course applied for : _____

Personal details (In BLOCK Letters)

First Name : _____ Last Name _____

E-mail ID _____

Landline No. _____ Mobile _____

Father's Name (In Block Letters) _____

Mother's Name (In Block Letters) _____

Date Of Birth _____

Local Address _____

Permanent Address _____

Occupation _____

Nationality _____ Gender (Tick) Male ☐ Female ☐

Blood Group _____

Academic Qualification (Starting from X or Equivalent of the certificate) (Enclose attested photocopies)

S. No.	Examination Passed	Name Of Board/ University	Year	Marks Obtained	% of Marks

Any Professional /Academic Achievements:

Declaration by the candidate

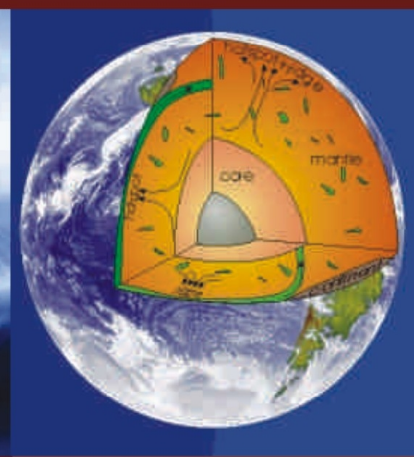
I declare that the information given above is true and complete and to the best of my knowledge & belief, and if any of it is found to be incorrect my admission shall stand cancelled and I shall be liable to such disciplinary action as may be decided by the AFA.

The decision of AFA there on shall be final.

Place _____

Date _____

Signature of the Student _____



Contact Details:

Aqua Foundation Academy

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