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KONERU LAKSHMAIAH EDUCATION FOUNDATION

(Deemed to be university estd, u/s, 3 of the UGC Act, 1956)

(NAAC Accredited "A" Grade University)

PROJECT BASED LAB REPORT

On

Expert system for organizing Conferences

Submitted

For

Partial fulfilment of requirements for II year B.Tech program

By

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Under the Esteemed guidance

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Green Fields, Vaddeswaram, Guntur District-522502

2018-19

CERTIFICATE

This is to certify that the project based laboratory report entitled "**Expert system for organizing Conferences**" submitted by **CH Krishna Chaitanya** bearing Regd. No **170030184,** in partial fulfilment of the requirements for the award of degree in **BACHELOR OF TECHNOLOGY** in **COMPUTER SCIENCE AND ENGINEERING** during the Academic year 2018-2019.

Project guide

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Head of the Department

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DECLARATION

We hereby declare that this project based lab report titled **"Expert system for organizing Conferences"** has been prepared by us in partial fulfilment of the requirements for the award of degree "**BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGNEERING**" during the Academic year 2018-2019.

We also declare that this project based lab report is of our own efforts and it has not been submitted to any other university for the award of any degree.

CH Krishna chaitanya 170030184

ACKNOWLEDGEMENT

Our sincere thanks to **Ms. Arpita Roy** in the Lab for their outstanding support throughout the project for the successful completion of the work.

We express our gratitude to **DR. HARI KIRAN VEGE,** Head of the Department for Computer science and Engineering for providing us with adequate facilities, ways and means by which we are able to complete this project based Lab.

We would like to place on record the deep sense of gratitude to the honourable Vice Chancellor, K L University for providing the necessary facilities to carry the project based Lab.

Finally, it is pleased to acknowledge the indebtedness to all those who devoted themselves directly or indirectly to make this project report success.

CH Krishna chaitanya 170030184

CONTENTS

ABSTRACT

In this project we design develop and implement an expert system in organizing the conference using python programming. The expert systems are the computer applications developed to solve complex problems in a particular domain, at the level of extra-ordinary human intelligence and expertise. The Components of Expert System are Knowledge Base, Inference Engine, user Interface

Some of the characteristics of the expert system are High performance, Understandable, Reliable and highly responsive. In this project we use algorithms like constraint satisfaction, alpha-beta pruning and mini-max algorithms to design an expert system to organize a conference. A constraint satisfaction problem (CSP) consists of a set of variables, a domain for each variable, and a set of constraints. Some of the constraints like date, time, venue, and call for papers, important dates, registration fee, publication charges, speakers, workshop, accommodation, certificate distribution and paper presentation required help us to find the answers for the questions as per the user request.

INTRODUCTION

Steps to organize the conference

- Date
- Time
- Book the venue
- Arrange catering
- Speakers
- Host the conference
- Registration fees
- Sponsors

Expert System

Expert systems are the computer applications developed to solve complex problems in a particular domain, at the level of extra-ordinary human intelligence and expertise.

Characteristics of Expert Systems

- High performance
- Understandable
- Reliable
- Highly responsive

Capabilities of Expert Systems

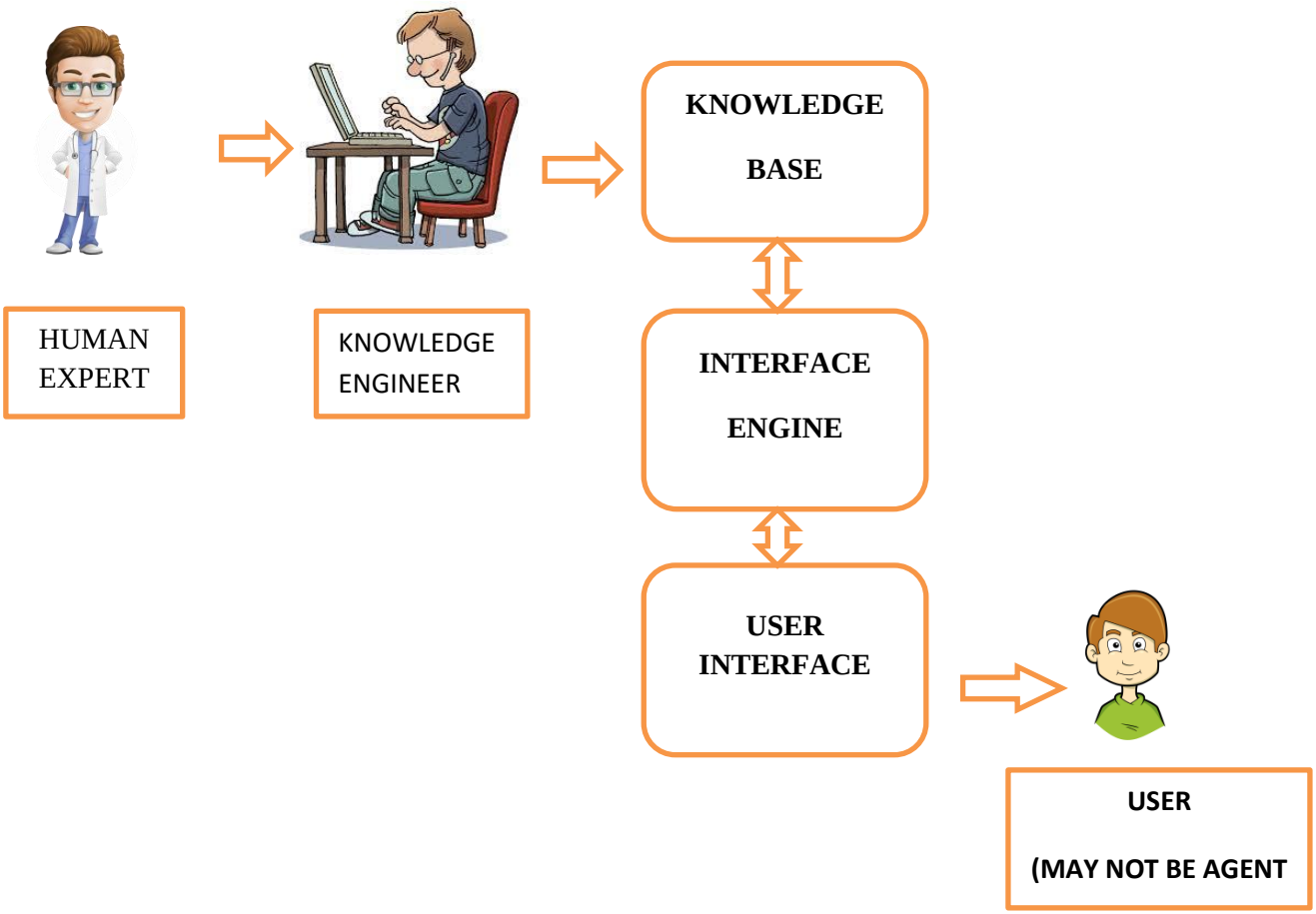
The expert systems are capable of −

- Advising

- Instructing and assisting human in decision making
- Demonstrating
- Deriving a solution
- Diagnosing
- Explaining
- Interpreting input
- Predicting results

Components of Expert Systems

- Knowledge Base
- Inference Engine
- User Interface



Knowledge Base

It contains domain-specific and high-quality knowledge. Knowledge is required to exhibit intelligence. The success of any ES majorly depends upon the collection of highly accurate and precise knowledge.

Components of Knowledge Base

The knowledge base of an ES is a store of both, factual and heuristic knowledge.

- **Factual Knowledge** − It is the information widely accepted by the Knowledge Engineers and scholars in the task domain.
- **Heuristic Knowledge** − It is about practice, accurate judgment, one's ability of evaluation, and guessing.

Inference Engine

Use of efficient procedures and rules by the Inference Engine is essential in deducting a correct, flawless solution. In case of knowledge-based ES, the Inference Engine acquires and manipulates the knowledge from the knowledge base to arrive at a particular solution.

User Interface

User interface provides interaction between user of the ES and the ES itself. It is generally Natural Language Processing so as to be used by the user who is well-versed in the task domain. The user of the ES need not be necessarily an expert in Artificial Intelligence.

It explains how the ES has arrived at a particular recommendation. The explanation may appear in the following forms

- Natural language displayed on screen.
- Verbal narrations in natural language.
- Listing of rule numbers displayed on the screen.

Applications of Expert System

Application	Description
1Design Domain	Camera lens design, automobile design.
Medical Domain	Diagnosis Systems to deduce cause of disease from observed data, conduction medical operations on humans.
Monitoring Systems	Comparing data continuously with observed system or with prescribed behavior such as leakage monitoring in long petroleum pipeline.
Process Control Systems	Controlling a physical process based on monitoring.
Knowledge Domain	Finding out faults in vehicles, computers.
Finance/Commerce	Detection of possible fraud, suspicious transactions, stock market trading, Airline scheduling, cargo scheduling.

LITERATURE SURVEY

A computer application that performs a task that would otherwise be performed by a human expert. For example, there are experts systems that can diagnose human illnesses, diagnoses cars problems, make financial forecasts, and schedule routes for delivery vehicles. Some expert systems are designed to take the place of human experts, while others are designed to aid them.

Expert systems are part of a general category of computer applications known as artificial intelligence. To design an expert system, one needs a knowledge engineer, an individual who studies how human experts make decisions and translates the rules into terms that a computer can understand. The organization in the conferences utilizes a rule bases expert system.

The model is the basis of the rule base. It serves both as a description of the function of the rule base, and as a touchstone for the actual development of the rules.

The objects at the first level of the model are the schema of the workshop that is details that user demands such as date, venue, topics to be discussed in the workshop. The objects at this level are both syntactically and semantically dependent on the source. At this level, the major schema of the workshop is represented which is more important to proceed.

At the second level, the exact data is extracted from the system as per the user request that is if the input is given as date then the date when the conference is going to be held is displayed. If the input is out of option then we can give the user to choose an option from the above schema which is discussed in first level.

The expert system in organizing the conference is responsible for applying the rules to the evidence provided as per the user request. In general, the rules do not change during the execution of the expert system.

Logically the rules have the form:

Request =>Reply

Where the request by the user and the reply from the system. The overall structure of the rule base is a tree rooted at the top. If the user gives the input then the reply as per the request will be processed and decrease the efficiency in searching the entire program rather than searching a required question. The expert system shell consists of approximately a 40 lines of source code. The user is responsible for reading the request.

FUNCTIONAL REQUIREMENTS

Software Requirements

The major software requirements of the project are as follows:

Language **:** Python

Operating system**:** Windows Xp

Hardware Requirements

The hardware requirements that map towards the software are as follows:

RAM : 4 GB

Processor : Intel

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METHODLOGY

Algorithms

Constraint Satisfaction Problems

A constraint satisfaction problem (CSP) consists of

- a set of variables,
- a domain for each variable

The aim is to choose a value for each variable so that the resulting possible world satisfies the constraints; we want a model of the constraints. A finite CSP has a finite set of variables and a finite domain for each variable. Many of the methods considered in this chapter only work for finite CSPs, although some are designed for infinite, even continuous, domains. The multidimensional aspect of these problems, where each variable can be seen as a separate dimension, makes them difficult to solve but also provides structure that can be exploited.

Mini-Max Algorithm

It is the strategy used by combinational search that uses heuristic to speed up the search strategy. Heuristic plays an important role in such kind of strategies like Mini-Max. Every node of the tree would have a heuristic function associated with it. Based on that heuristic, it will take the decision to make a move towards the node that would benefit them the most.

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SOURCE CODE

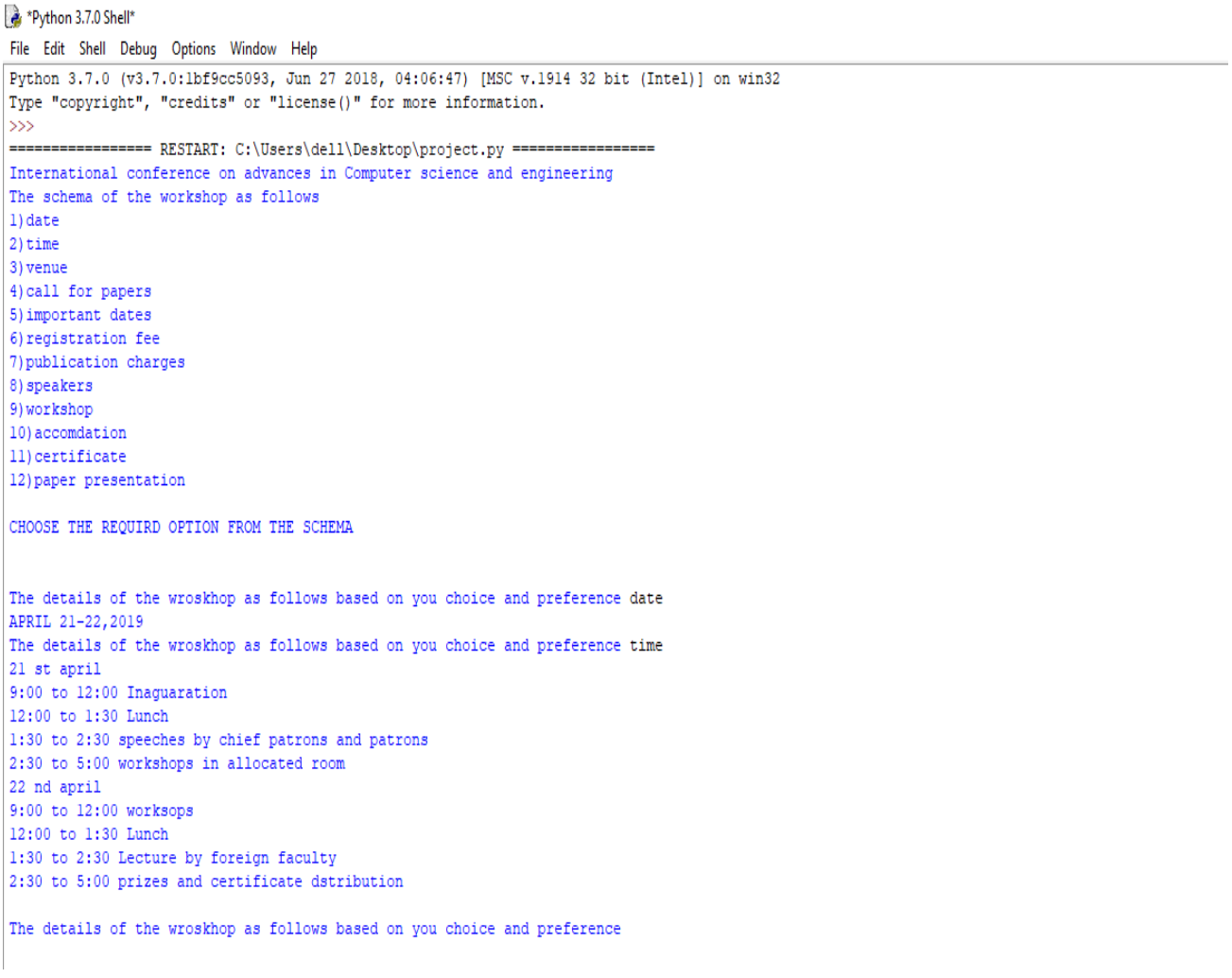
```
import random
print("International conference on advances in Computer science and
engineering")
print("The schema of the workshop as follows")
print("1)date\n2)time\n3)venue\n4)call for papers\n5)important
dates\n6)registration fee\n7)publication
charges\n8)speakers\n9)workshop\n10)accomdation\n11)certificate\n1
2)paper presentation\n")
print("CHOOSE THE REQUIRD OPTION FROM THE
SCHEMA\n\n")
m=["date","time","venue","call for papers","important
dates","registration fee","publication
charges","speakers","workshop","accomdation","certificate","paper
presentation"]
message=random.choice(m)
while message!='':
    message=input("The details of the workshop as follows based on
you choice and preference ")
    if(message=="date"):
        str1= "APRIL 21-22,2019"
        print(str1)
    elif(message=="time"):
```

```
        str1= "21 st april\n9:00 to 12:00 Inaguaration\n12:00 to 1:30
Lunch\n1:30 to 2:30 speeches by chief patrons and patrons\n2:30 to
5:00 workshops in allocated room\n22 nd april\n9:00 to 12:00
worksops\n12:00 to 1:30 Lunch\n1:30 to 2:30 Lecture by foreign
faculty\n2:30 to 5:00 prizes and certificate dstribution\n"
        print(str1)
    elif(message=="venue"):
        str1="K L Deemed to be University\nVijayawada\nGreen
field\nvaddeswaram\nGuntur District,AP,India\nPincode
:522502\nPHONE NO:-0863-1245324"
        print(str1)
    elif(message=="call for papers"):
        str1="IMPORTANT DATES\nLast Date for Submission of
full paper : 27/01/2019\nLast Date for Acceptance of full paper :
10/02/2019\nLast Date for Acceptance of full paper in conference
format: 17/02/2019\n"
        print(str1)
    elif(message=="important dates"):
        str1="Last Date for Submission of abstract :
15/12/2018\nLast Date for Acceptance of abstract : 30/12/2018\nLast
Date for Submission of full paper : 27/01/2019\nNotification on
Acceptance of full paper : 10/02/2019\nLast Date for Acceptance of
full paper in conference format : 17/02/2019\n"
        print(str1)
    elif(message=="registration fee"):
```

```
        str1="Delegates:-authors 13000\t\tauthors
11000\nParticipants:- Normal 3000\tStudents 1500\n"
        print(str1)
    elif(message=="publication charges"):
        str1="ACCOUNT NUMBER-1323456678\nIFSC CODE-
BHJ1234\nBRANCH KL University,Vaddeswaram\n"
        print(str1)
    elif(message=="speakers"):
        str1="CHIEF PATRONS:-Sri Koneru Satyanarayana,
President, KLEF\nDr. K. Subba Rao, Principal, College of
Engineering, KLEF\nPatrons:- Dr. V Hari kiran, HOD, CSE,KLEF\n"
        print(str1)
    elif(message=="workshop"):
        str1="1) artificial intelligence\n2) bioinformatics\n3)
computational statistics\n4) data mining\n5) Industrial
engineering\n6) internet computing\n"
        print(str1)
    elif(message=="accomdation"):
        str1="HOTEL- DV MANOR\tmg road, vijayawada-
520010\tcontact 866 6634455\nHOTEL- GATE WAY\tMg road
vijayawada-520010\tcotact 0866 6644444\n"
        print(str1)
    elif(message=="certificate"):
        str1="GOLD MEDAL FOR SELECTED RESEARCH
PAPER\nPARTICIPATION CERTIFICATES FOR ALL WHO
SUBMITTED RESEARCH PAPERS\n"
```

```
        print(str1)
    elif(message=="paper presentation"):
        str1="THEME;- BLOCK CHAINING\nABSTRACT
SUBMISSION LAST DATE- APRIL 15 th,2019\nTEAM SIZE:
MAXIMUM-4\nMAIL ID:-ICACSE@gmail.com\n"
        print(str1)
    else:
        print("CHOOSE THE OPTION PRESENT IN SCHEMA")
```

RESULT



Python 3.7.0 Shell

File Edit Shell Debug Options Window Help

```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
================ RESTART: C:\Users\dell\Desktop\project.py ================
International conference on advances in Computer science and engineering
The schema of the workshop as follows
1)date
2)time
3)venue
4)call for papers
5)important dates
6)registration fee
7)publication charges
8)speakers
9)workshop
10)accomdation
11)certificate
12)paper presentation

CHOOSE THE REQUIRD OPTION FROM THE SCHEMA


The details of the wroskhop as follows based on you choice and preference publication charges
ACCOUNT NUMBER-1323456678
IFSC CODE-BHJ1234
BRANCH KL University,Vaddeswaram

The details of the wroskhop as follows based on you choice and preference speakers
CHIEF PATRONS:-Sri Koneru Satyanarayana, President, KLEF
Dr. K. Subba Rao, Principal, College of Engineering, KLEF
Patrons:- Dr. V Hari kiran,HOD, CSE,KLEF

The details of the wroskhop as follows based on you choice and preference
```

Python 3.7.0 Shell

File Edit Shell Debug Options Window Help

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7)publication charges
8)speakers
9)workshop
10)accomdation
11)certificate
12)paper presentation

CHOOSE THE REQUIRD OPTION FROM THE SCHEMA


The details of the wroskhop as follows based on you choice and preference paper presentation
THEME;- BLOCK CHAINING
ABSTRACT SUBMISSION LAST DATE- APRIL 15 th,2019
TEAM SIZE: MAXIMUM-4
MAIL ID:-ICACSE@gmail.com

The details of the wroskhop as follows based on you choice and preference certificate
GOLD MEDAL FOR SELECTED RESEARCH PAPER
PARTICIPATION CERTIFICATES FOR ALL WHO SUBMITTED RESEARCH PAPERS

The details of the wroskhop as follows based on you choice and preference topic
CHOOSE THE OPTION PRESENT IN SCHEMA
The details of the wroskhop as follows based on you choice and preference
```

CONCLUSION

` The Expert system in organizing conference has been implemented successfully. So in this way we can understand how the conference is organized and how effectively we get the answers for the required questions as per the user requests. Expert system in organizing the conference has improved the basic exercise to manage the schedule of the conference like date, time, venue etc. It will be a more efficient and reduces the time of the operations which will basically take more time manually**.**

REFERENCES

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