



JNIESTRT'S
SMT. INDIRA GANDHI COLLEGE OF ENGINEERING
GHANSOLI, NAVI MUMBAI – 400701
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)
COMPUTER ENGINEERING DEPARTMENT

ACADEMIC YEAR :- 2021-22(EVEN SEM)

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NAME- DEEPAK H CHOURASIYA
ROLL NO - 77
YEAR - TE SEM - VI
BRANCH - COMPUTER

EXPERIMENT NO : 09

(MINI PROJECT)

TITLE:- IMPLEMENTATION OF AN EXPERT SYSTEM IN PYTHON.

Date of Performance	Date of Evaluation	Marks (10)					Sign / Remark
		A	B	C	D	E	
		2	3	2	2	1	
01/03/22	05/04/22						
		Total Marks					



Date: _____

Date	Experiment / Mini Project	Sign:
01-03-22	Exp:- Implementation of an expert system in python.	Grade:

Aim: Implementation of expert system.
Expert system - Film Recommender using Bolog.

Theory: An expert system is a program that uses artificial (AI) technologies to simulate the knowledge and judgement of humans. Expert system usually include a subject-specific knowledge base and can have additional modules added to expand their capabilities. Typically, an expert system incorporate a knowledge base containing accumulating experience and an inference or rules engine - a set of rules for applying the knowledge base to each particular situation that is described the program. The system's capabilities that be allow them to improve their performance based on experience, just as humans do.

→ The concept of expert systems was first developed in the 1970s by Edward Feigenbaum professor and founder of the



Date: _____

Knowledge systems laboratory at Stanford University. Feigenbaum explained that the world was moving from data processing to "knowledge processing", a transition which was being enabled by new processor technology and computer architecture.

→ Expert systems have played large role in many industries including in financial services, tele-communications, healthcare, customer service, transportation video games, manufacturing, aviation and written communication. Two early expert systems broke ground in the healthcare space for medical diagnosis. Dendral, which helped chemists identify organic molecules, and MYCIN, which helped chemists identify organic molecules, and MYCIN which helped to identify bacteria such as bacteremia and meningitis and to recommend antibiotic and dosages.

→ A more recently developed expert system, ROSS, is an artificially intelligent - attorney based on IBM's Watson cognitive computing system. ROSS relies on self-learning systems that use data mining, pattern recognition, deep learning and natural language processing to mimic the way the human brain works.



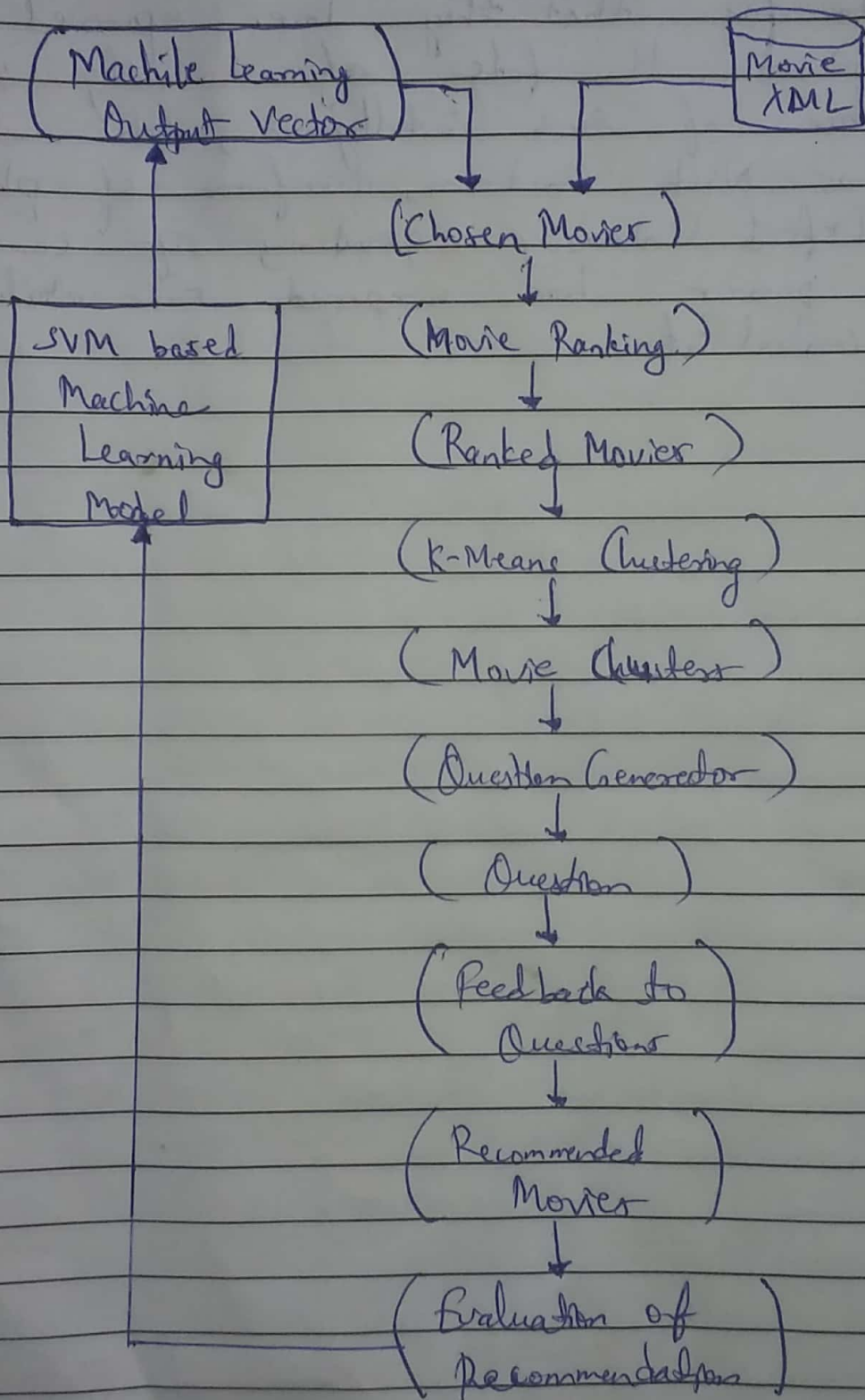
Date: _____

→ Expert systems and AI systems have evolved so far that they have spurred debate about the fate of humanity in the face of such intelligence, with authors such as Nick Bostrom, professor of philosophy at Oxford University, wondering if computing power has surpassed our ability to control it.



Date: _____

→ Movie Recommendation System (Flowchart):



Implementation:

Code:

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/*** DRAMA */
film('Zielona mila', 'Frank Darabont', 1999, 'drama', 'others', 188, 'USA', 'Tom Hanks', 8.7, 719).
film('Pif Paf! Jesteś trup', 'Guy Ferland', 2002, 'drama', 'others', 87, 'Kanada', 'Ben Foster', 7.7, 16).
film('Dogville', 'Lars von Trier', 2003, 'drama', 'others', 178, 'Dania', 'Nicole Kidman', 7.7, 45).
film('Z dystansu', 'Ton Kayne', 2011, 'drama', 'others', 180, 'USA', 'Adrien Brody', 7.9, 30).
film('Lista Schindlera', 'Steven Spielberg', 1993, 'drama', 'others', 195, 'USA', 'Adrien Brody', 8.4, 259).
film('Requiem dla snu', 'Darren Aronofsky', 2000, 'drama', 'others', 182, 'USA', 'Jared Leto', 7.9, 520).
film('Blutiful', 'Alejandro Gonzalez Inarritu', 2010, 'drama', 'others', 148, 'Hiszpania', 'Javier Bardem', 7.6, 12).
film('Czarny labedz', 'Darren Aronofsky', 2010, 'drama', 'others', 188, 'USA', 'Natalie Portman', 7.7, 248).
film('Gladiator', 'Ridley Scott', 2000, 'drama', 'others', 155, 'USA', 'Russell Crowe', 8.1, 552).
film('Dzien swira', 'Marek Kotowski', 2002, 'drama', 'others', 123, 'Polska', 'Marek Kondrat', 7.8, 438).
film('Pianista', 'Roman Polanski', 2002, 'drama', 'others', 150, 'Polska', 'Adrien Brody', 8.3, 410).
/*** COMEDY */
film('Seksmisja', 'Juliusz Machulski', 1984, 'comedy', 'others', 118, 'Polska', 'Jerzy Stuhr', 7.9, 420).
film('Forrest Gump', 'Robert Zemeckis', 1994, 'comedy', 'others', 144, 'USA', 'Tom Hanks', 8.6, 697).
film('Kac Vegas', 'Todd Phillips', 2009, 'comedy', 'others', 180, 'USA', 'Bradley Cooper', 7.3, 537).
film('Notykalni', 'Olivier Nakache', 2011, 'comedy', 'others', 112, 'Francja', 'Francois Cluzet', 8.7, 393).
film('Truman Show', 'Peter Weir', 1998, 'comedy', 'others', 183, 'USA', 'Jim Carrey', 7.4, 383).
film('Kiler', 'Juliusz Machulski', 1997, 'comedy', 'others', 184, 'Polska', 'Cezary Pazura', 7.7, 315).
film('Kevin sam w domu', 'Chris Columbus', 1990, 'comedy', 'others', 183, 'USA', 'Macaulay Culkin', 7.1, 297).
film('Mis', 'Stanislaw Bareja', 1980, 'comedy', 'others', 111, 'Polska', 'Stanislaw Tym', 7.8, 261).
film('Diabel ubiera sie u Prady', 'David Frankel', 2006, 'comedy', 'others', 189, 'USA', 'Meryl Streep', 6.9, 227).
film('Jak rozpetalem druga wojne swiatowa', 'Tadeusz Chmielewski', 1969, 'comedy', 'others', 236, 'Polska', 'Marian Kociniak', 7.9, 195).
/*** ADVENTURE */
film('Wladca Pierscieni: Druzyna Pierscienia', 'Peter Jackson', 2001, 'adventure', 'fantasy', 178, 'Nowa Zelandia', 'Elijah Wood', 8.1, 583).
film('Sherlock Holmes', 'Guy Ritchie', 2009, 'adventure', 'family', 128, 'Nowcy', 'Robert Downey Jr', 7.8, 317).
film('Harry Potter i Kamien Filozoficzny', 'Chris Columbus', 2001, 'adventure', 'fantasy', 152, 'Wielka Brytania', 'Daniel Radcliffe', 7.4, 269).
film('Hobbit: Nozzykla podroz', 'Peter Jackson', 2012, 'adventure', 'fantasy', 169, 'Nowa Zelandia', 'Martin Freeman', 7.7, 269).
film('Piraci z Karaibow: Skrzynia umarlaka', 'Gore Verbinski', 2006, 'adventure', 'fantasy', 150, 'USA', 'Johnny Depp', 7.8, 295).
film('Matrix', 'Andy Wachowski', 1999, 'adventure', 'scifi', 136, 'USA', 'Keanu Reeves', 7.6, 629).
film('Powrot do przyszlosci', 'Robert Zemeckis', 1985, 'adventure', 'scifi', 116, 'USA', 'Michael J. Fox', 7.3, 265).
film('W pustyni i w puszczy', 'Gavin Hood', 2001, 'adventure', 'family', 110, 'Polska', 'Karolina Sawka', 5.6, 48).
film('Wiedzmin', 'Marek Brodzki', 2001, 'adventure', 'fantasy', 130, 'Polska', 'Michal Zebrowski', 3.9, 37).
film('Gwiezdne wojny: Czesc IV - Nowa nadzieja', 'George Lucas', 1977, 'adventure', 'scifi', 121, 'USA', 'Mark Hamill', 8.0, 199).
/*** THRILLER */
film('Milczono owiec', 'Jonathan Demme', 1991, 'thriller', 'others', 118, 'USA', 'Anthony Hopkins', 8.2, 474).
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film('Gwiezdne wojny: Czesc IV - Nowa nadzieja', 'George Lucas', 1977, 'adventure', 'scifi', 121, 'USA', 'Mark Hamill', 8.0, 199).
/** THRILLER */
film('Milczono owiec', 'Jonathan Demme', 1991, 'thriller', 'others', 118, 'USA', 'Anthony Hopkins', 8.2, 474).
film('Kod da Vinci', 'Ron Howard', 2006, 'thriller', 'others', 149, 'USA', 'Tom Hanks', 6.6, 447).
film('Szosty zmysl', 'M. Night Shyamalan', 1999, 'thriller', 'others', 107, 'USA', 'Bruce Willis', 7.9, 482).
film('Podziemi krag', 'David Fincher', 1999, 'thriller', 'others', 139, 'Nomcy', 'Brad Pitt', 8.3, 426).
film('Se7en', 'David Fincher', 1995, 'thriller', 'others', 127, 'USA', 'Morgan Freeman', 8.3, 409).
film('Wyspa tajemnic', 'Martin Scorsese', 2010, 'thriller', 'others', 138, 'USA', 'Leonardo Di Caprio', 8.1, 374).
film('Adwokat diabla', 'Taylor Hackford', 1997, 'thriller', 'others', 144, 'Nomcy', 'Keanu Reeves', 8.0, 317).
film('Sala samobojcow', 'Jan Komasa', 2011, 'thriller', 'others', 'Polska', 117, 'Jakub Gierszal', 6.5, 223).
film('American Psycho', 'Mary Harron', 2000, 'thriller', 'others', 'USA', 101, 'Christian Bale', 7.3, 105).
film('Inni', 'Alejandro Amenabar', 2001, 'thriller', 'others', 'Francja', 101, 'Nicole Kidman', 7.4, 166).
/** ANIMATION */
film('Shrek', 'Andrew Adamson', 2001, 'animation', 'others', 90, 'USA', 'Mike Myers', 7.8, 604).
film('Epoka lodowcowa', 'Chris Wedge', 2002, 'animation', 'others', 81, 'USA', 'Cezary Pazura', 7.6, 359).
film('Krol lew', 'Rob Minkoff', 1994, 'animation', 'others', 89, 'USA', 'Matthew Broderick', 8.3, 381).
film('Madagaskar', 'Tom McGrath', 2005, 'animation', 'others', 86, 'USA', 'Ben Stiller', 7.5, 290).
film('Odlot', 'Pete Docter', 2009, 'animation', 'others', 96, 'USA', 'Edward Asner', 7.4, 161).
film('Gdzie jest Nemo?', 'Andrew Stanton', 2003, 'animation', 'others', 100, 'Australia', 'Alexander Gould', 7.1, 126).
film('Toy Story', 'John Lasseter', 1995, 'animation', 'others', 80, 'USA', 'Tom Hanks', 7.4, 124).
film('Kosmiczny mecz', 'Joe Pytko', 1996, 'animation', 'others', 88, 'USA', 'Michael Jordan', 6.9, 100).
film('Miasteczko South Park', 'Trey Parker', 1999, 'animation', 'others', 81, 'USA', 'Trey Parker', 7.2, 59).
film('Tarzan', 'Chris Buck', 1999, 'animation', 'others', 88, 'USA', 'Tony Goldwyn', 7.4, 42).
/** ROMANCE */
film('Czekolada', 'Lasse Hallstrom', 2000, 'romance', 'others', 117, 'USA', 'Juliette Binoche', 7.5, 164).
film('Step Up - Tanoc zmyslow', 'Anne Fletcher', 2006, 'romance', 'others', 104, 'USA', 'Channing Tatum', 7.0, 174).
film('Czas na milosc', 'Richard Curtis', 2013, 'romance', 'others', 119, 'Wielka Brytania', 'Domhnall Gleeson', 7.6, 100).
film('500 dni milosci', 'Marc Webb', 2009, 'romance', 'others', 95, 'USA', 'Joseph Gordon-Levitt', 7.2, 99).
film('Lepiej pozno niz poznoj', 'Nancy Meyers', 2003, 'romance', 'others', 128, 'USA', 'Jack Nicholson', 7.0, 102).
film('Amelia', 'Jean-Pierre Jeunet', 2001, 'romance', 'others', 129, 'Francja', 'Audrey Tautou', 7.6, 203).
film('To wlasno milosc', 'Richard Curtis', 2003, 'romance', 'others', 135, 'USA', 'Colin Firth', 7.7, 173).
film('Dziennik Bridget Jones', 'Sharon Maguire', 2001, 'romance', 'others', 97, 'Wielka Brytania', 'Renee Zellweger', 6.9, 204).
film('Tylko mmo kochaj', 'Ryszard Zatorski', 2006, 'romance', 'others', 98, 'Polska', 'Agnoszka Grochowska', 5.8, 137).
film('Nigdy w zyciu!', 'Ryszard Zatorski', 2004, 'romance', 'others', 100, 'Polska', 'Danuta Stenka', 6.2, 129).
/** HORROR */
film('Lsnono', 'Stanley Kubrick', 1980, 'horror', 'psychopaths', 146, 'USA', 'Jack Nicholson', 7.9, 293).
film('Tajemna komora', 'Enrico Lombardi', 2007, 'horror', 'psychopaths', 101, 'Australia', 'Will Smith', 7.5, 344).

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(Implementation Part – 02)


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film('Jestem legenda', 'Francis Lawrence', 2007, 'horror', 'monsters', 101, 'Australia', 'Will Smith', 7.5, 344).
film('Wywiad z wampirem', 'Neil Jordan', 1994, 'horror', 'monsters', 123, 'USA', 'Brad Pitt', 7.8, 243).
film('Obcy - 8. pasazer Nostromo', 'Ridley Scott', 1979, 'horror', 'monsters', 117, 'USA', 'Sigourney Weaver', 7.9, 211).
film('The Ring', 'Gore Verbinski', 2002, 'horror', 'ghosts', 115, 'Japonia', 'Naomi Watts', 7.0, 173).
film('Pila', 'James Wan', 2004, 'horror', 'psychopaths', 103, 'Australia', 'Tobin Bell', 6.7, 172).
film('Oszukac przeznaczeno', 'James Wong', 2000, 'horror', 'others', 98, 'Kanada', 'Devon Sawa', 6.6, 158).
film('Dziwiate wrota', 'Roman Polanski', 1999, 'horror', 'others', 133, 'Francja', 'Johnny Depp', 7.3, 148).
film('Obecnosc', 'James Wan', 2013, 'horror', 'ghosts', 112, 'USA', 'Vera Farmiga', 7.4, 116).
film('Sierocinoc', 'Juan Antonio Bayona', 2007, 'horror', 'ghosts', 105, 'Hiszpania', 'Belen Rueda', 7.0, 119).
film('Rytual', 'Mikael Hafstrom', 2011, 'horror', 'ghosts', 114, 'USA', 'Anthony Hopkins', 6.8, 84).
/** ACTORS */
actress('Nicole Kidman').
actress('Natalie Portman').
actress('Meryl Streep').
actress('Karolina Sawka').
actress('Juliette Binoche').
actress('Channing Tatum').
actress('Audrey Tautou').
actress('Renee Zellweger').
actress('Agnieszka Grochowska').
actress('Danuta Stenka').
actress('Sigourney Weaver').
actress('Naomi Watts').
actress('Vera Farmiga').
actress('Belen Rueda').
actor(X) :- not(actress(X)).
/** HELPERS FUNCTION */
polish(Y)                :- film(Y,_,_,_,_,X,_,_), X='Polska'.
foreign(Y)               :- film(Y,_,_,_,_,X,_,_), X \= 'Polska'.
film_with_actor(Y)       :- film(Y,_,_,_,_,X,_,_), actor(X).
film_with_actress(Y)    :- film(Y,_,_,_,_,X,_,_), actress(X).
duration(Y,0)           :- film(Y,_,_,_,X,_,_,_), 20 < X, X < 90, 0 == 'short'.
duration(Y,0)           :- film(Y,_,_,_,X,_,_,_), 91 < X, X < 170, 0 == 'long'.
duration(Y,0)           :- film(Y,_,_,_,X,_,_,_), 171 < X, 0 == 'verylong'.
year(Y,0)               :- film(Y,_,X,_,_,_,_,_), X < 1980, 0 == 'older'.
year(Y,0)               :- film(Y,_,X,_,_,_,_,_), 1981 < X, X < 2005, 0 == 'decent'.
year(Y,0)               :- film(Y,_,X,_,_,_,_,_), 2006 < X, 0 == 'newer'.

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(Implementation Part – 03)


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duration(Y,0)                :- film(Y,_,_,_,X,_,_,_), 171< X, 0 == 'verylong'.
year(Y,0)                    :- film(Y,_,X,_,_,_,_,_), X < 1980, 0 == 'older'.
year(Y,0)                    :- film(Y,_,X,_,_,_,_,_), 1981 < X, X < 2005, 0 == 'decent'.
year(Y,0)                    :- film(Y,_,X,_,_,_,_,_), 2006 < X, 0 == 'newer'.
year(Y,01,02,03,04,05,06)   :- test(Y,01,02,03,04,05,06).
year(Y,01,02,03,04,05,06)   :- test(Y,01,02,03,04,05).
year(Y,01,02,03,04,05,06)   :- test(Y,01,02,03,05).
year(Y,01,02,03,04,05,06)   :- test(Y,02,03,05).
year(Y,01,02,03,04,05,06)   :- test(Y,02,05).
test(Y,01,02,03,04,05,06)   :- year(Y,01), film(Y,_,_,02,_,_,_,_,_), duration(Y,03), (04 == 'no' -> foreign(Y)), film(Y,_,_,_,05,_,_,_,_), (06 == 'w' ->
film_with_actress(Y) ; 06 == 'm' -> film_with_actor(Y)), !.
test(Y,01,02,03,04,05)     :- year(Y,01), film(Y,_,_,02,_,_,_,_,_), duration(Y,03), (04 == 'no' -> foreign(Y)), film(Y,_,_,_,05,_,_,_,_), !.
test(Y,01,02,03,05)       :- year(Y,01), film(Y,_,_,02,_,_,_,_,_), duration(Y,03), film(Y,_,_,_,05,_,_,_,_), !.
test(Y,02,03,05)          :- film(Y,_,_,02,_,_,_,_,_), duration(Y,03), film(Y,_,_,_,05,_,_,_,_), !.
test(Y,02,05)             :- film(Y,_,_,02,_,_,_,_,_), film(Y,_,_,_,05,_,_,_,_), !.
recommendation(X, Y, 0)    :- (X == 'woman', Y == 'happy'), 0 = 'comedy, adventure, romance'.
recommendation(X, Y, 0)    :- (X == 'woman', Y == 'sad'), 0 = 'drama, animation'.
recommendation(X, Y, 0)    :- (X == 'woman', Y == 'normal'), 0 = 'horror, animation, romance'.
recommendation(X, Y, 0)    :- (X == 'man', Y == 'happy'), 0 = 'comedy, adventure, thriller'.
recommendation(X, Y, 0)    :- (X == 'man', Y == 'sad'), 0 = 'drama, comedy'.
recommendation(X, Y, 0)    :- (X == 'man', Y == 'normal'), 0 = 'horror, animation, thriller'.
recommendation(X, Y, 0).
/** EXPERT SYSTEM */
start(Y) :-
    write('Expert System - Film Recommender OMNIBUS 2000'),nl,
    write('Please answer questions below'),nl,
    write('It helps to find best film for you'),nl,nl,
/** STARTING QUESTIONS */
    write(' What is your name? '),
    read(Name),nl,
    write(' Hello '),
    write(Name),nl,
    write(' What is your sex? '),nl,
    write('1. Woman'),nl,
    write('2. Man'),nl,
    read(Sex),nl,
    write(' What is your mood? ').nl.

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(Implementation Part – 04)

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write(' What is your mood? '),nl,
write('1. Sad'),nl,
write('2. Happy'),nl,
write('3. Normal'),nl,
read(Mood),nl,
write('Thanks to your answers we recommend following film gendre:'),nl,
recommendation(Sex, Mood, Gendre),
write(Gendre),nl,nl,

%%Ans1 - year
%%Ans2 - gendre
%%Ans3 - duration
%%Ans4 - production
%%Ans5 - special feature
%%Ans6 - main character
/** QUESTION - YEAR PRODUCTION */
write(' Do you like old films?'),nl,
write('1. Yes'),nl,
write('2. No'),nl,
read(A1),nl,
( A1 == 'no' ->
    write(' Something new?'),nl,
    write('1. Yes'),nl,
    write('2. No'),nl,
    read(A2),nl,
    (A2 == 'no' -> Ans1 = 'decent' ; Ans1 = 'newer')
    ;
    Ans1 = 'older'
),
/** QUESTION - FILM GENDRE */
write(' What film genre do you prefer?'),nl,
write('1. Animation'),nl,
write('2. Drama'),nl,
write('3. Horror'),nl,
write('4. Comedy'),nl,
write('5. Romance'),nl,
write('6. Thriller'),nl,

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(Implementation Part – 05)

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write('6. Thriller'),nl,
write('7. Adventure'),nl,
read(Ans2),nl,
/** QUESTION - SPECIAL FEATURE */
    (Ans2 == 'horror' ->
        write(' What are you afraid of?'),nl,
        write('1. Monsters'),nl,
        write('2. Ghosts'),nl,
        write('3. Others'),nl,
        read(Ans5),nl
        ;
        (Ans2 == 'adventure' ->
            write(' What type of film adventure?'),nl,
            write('1. Fantasy'),nl,
            write('2. Sci-Fi'),nl,
            write('3. Family'),nl,
            read(Ans5),nl
            ;
            Ans5='others'
        )
    ),
/** QUESTION - DURATION */
write(' How many time do you have?'),nl,
write('1. Little'),nl,
write('2. Many'),nl,
read(C1),nl,
( C1 == 'many' ->
    write(' Do you really have a lot of time?'),nl,
    write('1. Yes'),nl,
    write('2. No'),nl,
    read(C2),nl,
    (C2 == 'no' -> Ans3 = 'long' ; Ans3 = 'verylong')
    ;
    Ans3 = 'short'
),
/** QUESTION - COUNTRY PRODUCTION */

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(Implementation Part – 06)


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        Ans5='others'
    )
),
/** QUESTION - DURATION */
write(' How many time do you have?'),nl,
write('1. Little'),nl,
write('2. Many'),nl,
read(C1),nl,
( C1 == 'many' ->
    write(' Do you really have a lot of time?'),nl,
    write('1. Yes'),nl,
    write('2. No'),nl,
    read(C2),nl,
    (C2 == 'no' -> Ans3 = 'long' ; Ans3 = 'verylong')
    ;
    Ans3 = 'short'
),
/** QUESTION - COUNTRY PRODUCTION */
write(' Do you like polish cinema?'),nl,
write('1. Yes'),nl,
write('2. No'),nl,
read(Ans4),nl,
/** QUESTION - MAIN CHARACTER */
write(' Is main character a man?'),nl,
write('1. Yes'),nl,
write('2. No'),nl,
write('2. Whatever'),nl,
read(E1),nl,
( E1 == 'yes' ->
    Ans6 = 'm'
    ;
    (E1 == 'no' -> Ans6 = 'w' ; Ans6 = '')
),
/** QUESTION - YEAR PRODUCTION */
year(Y,Ans1,Ans2,Ans3,Ans4,Ans5,Ans6).

```

(Implementation Part – 07)

Output:

```
7- start(Y).
Expert System - Fila Recommender OMNIBUS 2000
Please answer questions below
It helps to find best fila for you

    What is your name? Deepak.

    Hello _18206
    What is your sex?
1. Women
2. Man
|: man.

    What is your mood?
1. Sad
2. Happy
3. Normal
|: normal.

Thanks to your answers we recommend following fila gendre:
horror, animation, thriller

    Do you like old filas?
1. Yes
2. No
|: yes.

    What fila genre do you prefer?
1. Animation
2. Drama
3. Horror
4. Comedy
5. Romance
6. Thriller
7. Adventure
|: animation.

    How many time do you have?
1. Little
2. Many
|: little.

    Do you like polish cinema?
1. Yes
2. No
|: no.

    Is main character a man?
1. Yes
2. No
2. Whatever
```

(Output Part – 01)

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1. Woman
2. Man
|: man.

    What is your mood?
1. Sad
2. Happy
3. Normal
|: normal.

Thanks to your answers we recommend following film genre:
horror, animation, thriller

    Do you like old films?
1. Yes
2. No
|: yes.

    What film genre do you prefer?
1. Animation
2. Drama
3. Horror
4. Comedy
5. Romance
6. Thriller
7. Adventure
|: animation.

    How many times do you have?
1. Little
2. Many
|: little.

    Do you like Polish cinema?
1. Yes
2. No
|: no.

    Is main character a man?
1. Yes
2. No
2. Whatever
|: yes.

Y = 'Epoka lodowcowa' .

?- 

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(Output Part – 02)



Date: _____

Conclusion: Thus, we have successfully studied and implemented an expert system (Movie Recommendation System).