WTandDA

_@Slip-1

Q.1)WriteaPHPscripttokeeptrackofnumberoftimesthewebpagehasbeenaccessed(Use Session Tracking).

```
Ans:

<?php

Session_start();

If(isset($_SESSION['pcount])){
    $_SESSION['pcount]+=1;
}else{
    $_SESSION['pcount]=1;
}

Echo"Youhavevisitedthispage".$_SESSION['pcount]."Time(s).";
?>
```

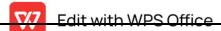
Q.2) Create 'Position_Salaries' Dataset. Build a linear regression model by identifying independent and Targetvariable. Split the variable sint otraining and testing sets. Then divide the training and testing sets Into a 7:3 ratio, respectively and print them. Build a simple linear regression model.

Ans:

Importnumpyasnp

Importpandasaspd

```
Fromsklearn.model_selectionimporttrain_test_split
Fromsklearn.linear_modelimportLinearRegression
#CreatethePosition_Salariesdataset
Data={'Position':['CEO','charman','director','SeniorManager','JuniorManager','Intern'],
     'Level':[1,2,3,4,5,6],
     'Salary':[50000,80000,110000,150000,200000,250000]}
Df=pd.DataFrame(data)
#Identifytheindependentandtargetvariables
X=df.iloc[:,1:2].values
Y=df.iloc[:,2].values
#Splitthevariablesintotrainingandtestingsetswitha7:3ratio
X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.3,random_state=0)
#Printthetrainingandtestingsets
Print("X_train:\n",X_train)
Print("y_train:\n",y_train)
Print("X_test:\n",X_test)
Print("y_test:\n",y_test)
#Buildasimplelinearregressionmodel
Regressor=LinearRegression() Regressor.fit(X_train,y_train)
{\it \#Print} the coefficients and intercept
Print("Coefficients:",regressor.coef_)
Print("Intercept:",regressor.intercept_)
```



@Slip-2

Q.1WriteaPHPscripttochangethepreferencesofyourwebpagelikefontstyle, fontsize, font color, Backgroundcolorusingcookie. Displayselectedsettingonnextwebpageandactual implementation (withnewsettings) on thirdpage (UseCookies).

```
Ans:
Fristpage.html
<!DOCTYPEhtml>
<html>
<head>
       <title>Changepreferences</title>
</head> <body>
       <h1>Changepreferences</h1>
       <formaction="secondpage.php"method="post">
              <labelfor="fontstyle">FontStyle:</label>
              <selectname="fontstyle"id="fontstyle">
                     <optionvalue="Arial">Arial</option>
                     <optionvalue="TimesNewRoman">TimesNewRoman
                     <optionvalue="Verdana">Verdana</option>
              </select><br><br>
              <labelfor="fontsize">FontSize:</label>
              <selectname="fontsize"id="fontsize">
                       <optionvalue="12">12</option>
                       <optionvalue="14">14</option>
                       <optionvalue="16">16</option>
```

```
</select><br><br>
               <labelfor="fontcolor">FontColor:</label>
               <inputtype="color"name="fontcolor"id="fontcolor"><br><br>
                <labelfor="bgcolor">BackgroundColor:</label>
                <inputtype="color"name="bgcolor"id="bgcolor"><br><br>
               <inputtype="submit"name="submit"value="Save">
        </form>
</body>
</html>
Secondpage.php
<?php
If(isset($_POST['submit'])){
        $fontstyle=$_POST['fontstyle'];
        $fontsize=$_POST['fontsize'];
        $fontcolor=$_POST['fontcolor'];
        $bgcolor=$_POST['bgcolor'];
        //Setthecookievalues
        Setcookie('fontstyle', $fontstyle, time()+86400);
        Setcookie('fontsize', $fontsize, time()+86400);
        Setcookie('fontcolor', $fontcolor, time()+86400);
        Setcookie('bgcolor',$bgcolor,time()+86400);
        //Redirecttothenextpage
        Header('Location:thirdpage.php');
        Exit();
}
```

```
?>
Thirdpage.php
<?php
//Retrievethecookievalues
$fontstyle=isset($_COOKIE['fontstyle'])?$_COOKIE['fontstyle']:'Arial';
$fontsize=isset($_COOKIE['fontsize'])?$_COOKIE['fontsize']:'12';
$fontcolor=isset($_COOKIE['fontcolor'])?$_COOKIE['fontcolor']:'#000000';
$bgcolor=isset($_COOKIE['bgcolor'])?$_COOKIE['bgcolor']:'#FFFFFF';
?>
<!DOCTYPEhtml>
<html>
<head>
       <title>Pagewithnewsettings</title>
       <styletype="text/css">
               Body{
                          Font-family:<?phpecho$fontstyle?>;
                          Font-size:<?phpecho$fontsize?>px;
                          Color:<?phpecho$fontcolor?>;
                       Background-color:<?phpecho$bgcolor?>;
               }
       </style>
</head> <body>
       <h1>Pagewithnewsettings</h1>
       Thisisthepagewiththenewsettings. The fontstyle is <?phpecho$fontstyle?>, the
fontsizeis<?phpecho$fontsize?>px,thefontcoloris<?phpecho$fontcolor?>,andthe
backgroundcoloris<?phpecho$bgcolor?>.
```

Q.2) Create 'Salary' Dataset. Build a linear regression model by identifying independent and target Ariable. Split the variable sint otraining and testing sets and print them. Build a simple linear regression Delfor predicting purchases.
Ans: Importnumpyasnp Importpandasaspd Fromsklearn.model_selectionimporttrain_test_split Fromsklearn.linear_modelimportLinearRegression
#CreatetheSalarydataset Data={'YearsExperience':[1,2,3,4,5,6,7,8,9,10],
#Identifytheindependentandtargetvariables X=df.iloc[:,0:1].values Y=df.iloc[:,1].values
#Splitthevariablesintotrainingandtestingsets X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.3,random_state=0) #Printthetrainingandtestingsets

```
Print("X_train:\n",X_train)

Print("y_train:\n",y_train)

Print("X_test:\n",X_test)

Print("y_test:\n",y_test)

#Buildasimplelinearregressionmodel

Regressor=LinearRegression() Regressor.fit(X_train,y_train)

#Printthecoefficientsandintercept

Print("Coefficients:",regressor.coef_)

Print("Intercept:",regressor.intercept_)
```

_@Slip-3

Q.1)WriteaPHPscripttoacceptusernameandpassword.Ifinthefirstthreechances, usernameand Passwordenterediscorrectthendisplaysecondformwith "Welcomemessage" otherwise displayerror Message.[UseSession]

```
Ans:
<?php
//Startsession
Session_start();

//Checkifloginformhasbeensubmitted
If(isset($_POST['submit'])){
//Getusernameandpasswordinputfromuser
```

```
$username=$_POST['username'];
$password=$_POST['password'];
//Setcorrectusernameandpassword
$correct_username='myusername';
$correct_password='mypassword';
//Checkifenteredusernameandpasswordarecorrect
If($username==$correct_username&&$password==$correct_password){
 //Setsessionvariabletomarkuserasloggedin $_SESSION['loggedin']=true;
 //Redirectusertowelcomepage
 Header('Location:welcome.php');
 Exit;
}else{
 //Decrementloginattempts
 If(isset($_SESSION['attempts'])){
  $_SESSION['attempts']--;
 }else{
  $_SESSION['attempts']=3;
 }
 //Displayerrormessageifmaximumloginattemptsexceeded
 If($_SESSION['attempts']<=0){</pre>
  Echo"Maximumloginattemptsexceeded.Pleasetryagainlater.";
 }else{
  //Displayerrormessage
  Echo"Invalidusernameorpassword.Youhave".$_SESSION['attempts']."Attempt(s)left.";
```

```
}
           }
?>
<!—HTMLformforuserinput?
 <formmethod="post">
           <labelfor="username">Username:</label>
           <inputtype="text"id="username"name="username"required><br><br>
           <labelfor="password">Password:</label>
           <inputtype="password"id="password"name="password"required><br><br>
           <inputtype="submit"name="submit"value="LogIn">
 </form>
Q.2) Create 'User' Dataset having 5 columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns namely: User ID, Gender, Age, Estimated Salary and Columns name ID, Gender, Age, Columns name ID, Gender, Age, Columns name ID, Gender, Age, 
 urchased. Build a logistic regression model that can predict whether on the given parameter a support of the production of the productin
 personwillbuyacarornot.
Ans:
Importpandasaspd
 Data={'UserID':[1,2,3,4,5,6,7,8,9,10],
                                                                                                                'Gender':['Male', 'Male', 'Female', 'Female', 'Male', 'Female', 'F
                                       'Age':[19,35,26,27,19,27,32,25,33,45],
                                     'EstimatedSalary':[19000,20000,43000,57000,76000,58000,82000,32000,69000,65000],
                                       'Purchased':[0,0,0,1,1,0,1,0,1,1]}
 Df=pd.DataFrame(data)
```

Fromsklearn.model_selectionimporttrain_test_split X=df.iloc[:,1:4].values Y=df.iloc[:,4].values X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.3,random_state=0) $From sklearn. linear_model import Logistic Regression$ Lr=LogisticRegression(random_state=0) Lr.fit(X_train,y_train) #Predictasingleobservation Observation=[[0,30,87000]] Prediction=Lr.predict(observation) Print(prediction) #Predictmultipleobservations Observations=[[0,30,87000],[1,50,45000],[1,22,30000]] Predictions=Lr.predict(observations)

_@Slip-4

Print(predictions)

Q.1)WriteaPHPscripttoacceptEmployeedetails(Eno,Ename,Address)onfirstpage.On second Pageacceptearning(Basic,DA,HRA).OnthirdpageprintEmployeeinformation(Eno,Ename, Address, Basic,DA,HRA,Total)[UseSession]

```
Ans:
Firstpage.php
<?php
Session_start();
?>
<!DOCTYPEhtml>
<html>
<head>
       <title>EmployeeDetails</title>
</head> <body>
       <h1>EmployeeDetails</h1>
       <formmethod="POST"action="Secondpage.php">
              <labelfor="eno">EmployeeNo:</label>
              <inputtype="text"id="eno"name="eno"><br><br>
              <labelfor="ename">EmployeeName:</label>
              <inputtype="text"id="ename"name="ename"><br><br>
              <labelfor="address">Address:</label>
              <textareaid="address"name="address"></textarea><br><br>
              <inputtype="submit"value="Next">
       </form>
</body>
</html>
<?php
//Storeemployeedetailsinsession
```

```
If(isset($_POST['eno'])&&isset($_POST['ename'])&&isset($_POST['address'])){
       $_SESSION['eno']=$_POST['eno'];
       $_SESSION['ename']=$_POST['ename'];
       $_SESSION['address']=$_POST['address'];
}
?>
Secondpage.php
<?php
Session_start();
?>
<!DOCTYPEhtml>
<html>
<head>
       <title>Earnings</title>
</head> <body>
       <h1>Earnings</h1>
       <formmethod="POST"action="thirdpage.php">
              <labelfor="basic">Basic:</label>
               <inputtype="text"id="basic"name="basic"><br><br>
              <labelfor="da">DA:</label>
              <inputtype="text"id="da"name="da"><br><br>
              <labelfor="hra">HRA:</label>
               <inputtype="text"id="hra"name="hra"><br><br>
              <inputtype="submit"value="Next">
       </form>
```

```
</body>
</html>
<?php
//Storeearningsinsession
If(isset(\$\_POST['basic'])\&\&isset(\$\_POST['da'])\&\&isset(\$\_POST['hra']))\{
       $_SESSION['basic']=$_POST['basic'];
       $_SESSION['da']=$_POST['da'];
       $_SESSION['hra']=$_POST['hra'];
}
?>
Thirdpage.php
<?php
Session_start();
//Calculatetotalearnings
$total=$_SESSION['basic']+$_SESSION['da']+$_SESSION['hra'];
?>
<!DOCTYPEhtml>
<html>
<head>
       <title>EmployeeInformation</title>
</head> <body>
       <h1>EmployeeInformation</h1>
       <strong>EmployeeNo:</strong><?phpecho$_SESSION['eno'];?>
```

```
<strong>EmployeeName:</strong><?phpecho$_SESSION['ename'];?>
       <strong>Address:</strong><?phpecho$_SESSION['address'];?>
       <strong>Basic:</strong><?phpecho$_SESSION['basic'];?>
       <strong>DA:</strong><?phpecho$_SESSION['da'];?>
       <strong>HRA:</strong><?phpecho$_SESSION['hra'];?>
       <strong>TotalEarnings:</strong><?phpecho$total;?>
</body>
</html>
Q.2) Build a simple linear regression model for Fish Species Weight Prediction.\\
Ans:
Importpandasaspd
Importrandom
Fromsklearn.linear_modelimportLinearRegression
#createthedataset
Fish_species=['Tuna','Salmon','Trout','Bass','Sardine','Cod','Mackerel']
Weights=[]
Foriinrange(50):
  Fish_weight=[]
  Forjinrange(7):
    Weight=random.randint(1,20)
    Fish_weight.append(weight)
  Weights.append(fish_weight)
```

```
Df=pd.DataFrame(weights,columns=fish_species)

#createthelinearregressionmodel

X=df.iloc[:,:-1]#independentvariables

Y=df.iloc[:,-1]#targetvariable

Model=LinearRegression() Model.fit(X,y)

#predicttheweightofanewfishspecies

New_fish=[[10,12,15,7,4,8]]#exampleinput

Predicted_weight=model.predict(new_fish)

Print("Predictedweight:",predicted_weight)
```

_@Slip-5

Q.1)CreateXMLfilenamed"Item.xml" withitem-name, item-rate, itemquantityStorethedetails of StemsofdifferentTypes.

Ans:

```
Item.xml
<items>
<itemtype="Electronics">
<name>Television</name>
<rate>500</rate>
<quantity>10</quantity>
</item>
<itemtype="Clothing">
<name>Shirt</name>
```

```
<rate>50</rate>
 <quantity>20</quantity>
</item>
<itemtype="Grocery"> <name>Rice</name>
 <rate>40</rate>
 <quantity>30</quantity>
</item>
<itemtype="Books">
 <name>HarryPotterandthePhilosopher'sStone</name>
 <rate>20</rate>
 <quantity>50</quantity>
</item>
<itemtype="Sports">
 <name>Football</name>
 <rate>100</rate>
 <quantity>5</quantity>
</item> </items>
```

Q.2) Use their is dataset. Write a Python program to view some basic statistical details like percentile, Mean, st detc. Of the species of 'Iris-setosa', 'Iris-versicolor' and 'Iris-virginica'. Applylogistic regression On the dataset to identify different species (setosa, versicolor, verginica) of Iris flowers given just 4 Features: sepaland petallengths and widths. Find the accuracy of the model.

Ans:

Importpandasaspd

Fromsklearn.datasetsimportload_iris

Fromsklearn.linear_modelimportLogisticRegression

Fromsklearn.model_selectionimporttrain_test_split Fromsklearn.metricsimportaccuracy_score #loadtheirisdataset Iris=load_iris() #createadataframefromthedataset Df=pd.DataFrame(iris.data,columns=iris.feature_names) Df['target']=iris.target #viewbasicstatisticaldetailsofthedifferentspecies Print("StatisticaldetailsofIris-setosa:") Print(df[df['target']==0].describe()) Print("StatisticaldetailsofIris-versicolor:") Print(df[df['target']==1].describe()) Print("StatisticaldetailsofIris-virginica:") Print(df[df['target']==2].describe()) #splitthedataintotrainingandtestingsets X=df.iloc[:,:-1] Y=df.iloc[:,-1] X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.2,random_state=42) #fitalogisticregressionmodel Logreg=LogisticRegression() Logreg.fit(X_train,y_train) #makepredictionsonthetestset Y_pred=logreg.predict(X_test) #calculatetheaccuracyofthemodel

```
Accuracy=accuracy_score(y_test,y_pred)
Print("Accuracyofthelogisticregressionmodel:",accuracy)
```

```
<sub>@</sub> Slip-6
Q.1)WritePHPscripttoread"book.xml"fileintosimpleXMLobject.Displayattributesand elements.
(simple_xml_load_file()function)
Ans:
<?php
//LoadtheXMLfileintoaSimpleXMLobject $xml=simplexml_load_file("book.xml");
//DisplaytheattributesandelementsoftheSimpleXMLobject
Echo"Bookattributes:<br>";
Echo"ISBN:".$xml['isbn']."<br>";
Echo"Publisher:".$xml['publisher']."<br>"; Echo"<br>";
Echo"Bookelements:<br>";
Echo"Title:".$xml->title."<br>";
Echo"Author: ".$xml->author. "<br>";
Echo"Description: ".$xml->description." <br>";
?>
Book.xmlfile
<?xmlversion="1.0"?>
<br/><bookisbn="978-3-16-148410-0"publisher="ExamplePublisher">
```

```
<title>ExampleBook</title>
 <author>JohnDoe</author>
 <description>Thisisanexamplebook.</description>
</book>
Q.2)Createthefollowingdatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply
The apriorial gorithm on the above dataset to generate the frequent items et sand association\ rules. Repeat
Teprocess with different min\_supvalues.\\
TID={1:["bread","milk"],2=["bread","diaper","beer","eggs"],3=["milk","diaper","beer","coke"],4=["bread","milk"]
d","milk","diaper","beer"],5=["bread","milk","diaper","coke"]}
Ans:
Importpandasaspd
Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori,association_rules
#createthedataset
TID=
{1:["bread","milk"],2:["bread","diaper","beer","eggs"],3:["milk","diaper","beer","coke"],4:["bread","mil
k","diaper","beer"],5:["bread","milk","diaper","coke"]}
Transactions=[]
Forkey, value in TID. items():
  Transactions.append(value)
#convertthecategoricalvaluesintonumericformat
Te=TransactionEncoder()
Te_ary=te.fit_transform(transactions)
Df=pd.DataFrame(te_ary,columns=te.columns_) #applytheapriorialgorithmwithdifferentmin_supvalues
```

```
Min_sup_values=[0.2,0.4,0.6]

Formin_supinmin_sup_values:

Frequent_itemsets=apriori(df,min_support=min_sup,use_colnames=True)

Rules=association_rules(frequent_itemsets,metric="confidence",min_threshold=0.7)

Print("Min_sup:",min_sup)

Print("FrequentItemsets:")

Print(frequent_itemsets)

Print("AssociationRules:")

Print(rules)
```

_@ Slip-7

7

 $Q.1) Write a PHP script to read "Movie.xml" file and print all Movie Title and Actor Name of file using \\OMD ocument Parser. "Movie.xml" file should contain following information with at least 5 records \\Wth values. Mvie Info Movie No, Movie Title, Actor Name, Re Release Year.$

Ans:

Phpfile

<?php

//LoadtheXMLfile

\$xml=newDOMDocument();

\$xml->load('Movie.xml');

//Getallthemovienodes

\$movies=\$xml->getElementsByTagName('MovieInfo');

```
//Loopthrougheachmovienodeandprintthemovietitleandactorname
Foreach($moviesas$movie){
  Echo"MovieTitle: ".$movie->getElementsByTagName('MovieTitle')[0]->textContent.", ";
  Echo"ActorName: ".$movie->getElementsByTagName('ActorName')[0]->textContent. "<br/>';
}
?>
XMLfile
<?xmlversion="1.0"?>
<MovieList>
  <MovieInfo>
    <MovieNo>1</MovieNo>
    <MovieTitle>TheShawshankRedemption</MovieTitle>
    <ActorName>TimRobbins</ActorName>
    <ReleaseYear>1994</ReleaseYear>
  </MovieInfo>
  <MovieInfo>
    <MovieNo>2</MovieNo>
    <MovieTitle>TheGodfather</MovieTitle>
    <ActorName>MarlonBrando</ActorName>
    <ReleaseYear>1972</ReleaseYear>
  </MovieInfo>
  <MovieInfo>
    <MovieNo>3</MovieNo>
    <MovieTitle>TheDarkKnight</MovieTitle>
```

```
<ActorName>ChristianBale</ActorName>
    <ReleaseYear>2008</ReleaseYear>
  </MovieInfo>
  <MovieInfo>
    <MovieNo>4</MovieNo>
    <MovieTitle>TheGodfather:PartII</MovieTitle>
    <ActorName>AlPacino</ActorName>
    <ReleaseYear>1974</ReleaseYear>
  </MovieInfo>
  <MovieInfo>
    <MovieNo>5</MovieNo>
    <MovieTitle>12AngryMen</MovieTitle>
    <ActorName>HenryFonda</ActorName>
    <ReleaseYear>1957</ReleaseYear>
  </MovieInfo>
</MovieList>
```

Q. 2) Download the Market basket dataset. Write apython program to read the dataset and display its Information. Preprocess the data (drop null value setc.) Convert the categorical values into numeric Format. Apply the apriorial gorithmonthe above dataset to generate the frequent items ets and association Rules...

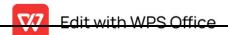
Ans:

Importpandasaspd

From mlxtend. preprocessing import Transaction Encoder

Frommlxtend.frequent_patternsimportapriori,association_rules

#readthedataset

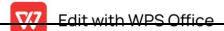


Df=pd.read_csv('Market_Basket_Optimisation.csv',header=None) #dropnullvalues Df.dropna(inplace=True) #convertcategoricalvaluestonumericusingone-hotencoding Te=TransactionEncoder() Te_ary=te.fit(df.values).transform(df.values) Df=pd.DataFrame(te_ary,columns=te.columns_) #generatefrequentitemsetsusingapriorialgorithm Frequent_itemsets=apriori(df,min_support=0.01,use_colnames=True) #generateassociationrulesfromfrequentitemsets Rules=association_rules(frequent_itemsets,metric="lift",min_threshold=1) #displayinformation Print("OriginalDataset:\n") Print(df.head()) Print("\nFrequentItemsets:\n") Print(frequent_itemsets) Print("\nAssociationRules:\n") Print(rules) **<u>Slip-8</u>** -8

Q.1) Write a Java Script to display message `Exams are near, have you started preparing for?' (use a lert near the context of the context o

```
Box)andAcceptanytwonumbersfromuseranddisplayadditionoftwonumber.(UsePrompt and Confirmbox)
AAAns:
//Displaymessageusingalertbox
Alert('Examsarenear, haveyous tarted preparing for?');
//Accepttwonumbersfromuserusingpromptandconfirmboxes
Letnum1=prompt('Enterfirstnumber:');
Letnum2=prompt('Entersecondnumber:');
LetconfirmMsg=`Areyousureyouwanttoadd${num1}and${num2}?`;
//Showconfirmationmessagetouserusingconfirmbox
LetconfirmResult=confirm(confirmMsg);
//Ifuserconfirms,thenperformadditionanddisplaytheresult
If(confirmResult){
 Num1=parseInt(num1);
 Num2=parseInt(num2);
 Letsum=num1+num2;
 Alert(`Thesumof${num1}and${num2}is${sum}.`);
}
Q.2) Download the groceries dataset. Write apython program to read the dataset and display its
Information.Preprocessthedata(dropnullvaluesetc.)Convertthecategoricalvaluesinto numeric
Format. Applytheapriorial gorithmonthe above dataset to generate the frequent items ets and association
Rules.
Ans:
Importpandasaspd
Frommlxtend.preprocessingimportTransactionEncoder
```

```
Frommlxtend.frequent_patternsimportapriori,association_rules
#Loadthedataset
Df=pd.read_csv('market_basket.csv')
#Dropanyrowswithnullvalues Df.dropna(inplace=True)
#Convertcategoricalvaluestonumericformat
Te=TransactionEncoder()
Te_ary=te.fit(df.values).transform(df.values)
Df=pd.DataFrame(te_ary,columns=te.columns_)
#Generatefrequentitemsets
Frequent_itemsets=apriori(df,min_support=0.01,use_colnames=True)
#Generateassociationrules
Rules=association_rules(frequent_itemsets,metric="lift",min_threshold=1)
{\tt \#Display} information about the dataset
Print("Datasetinformation:")
Print(df.info())
#Displaythefrequentitemsets
Print("\nFrequentitemsets:")
Print(frequent_itemsets)
#Displaytheassociationrules
Print("\nAssociationrules:")
Print(rules)
```



_@ Slip-9

-9

Q.1) Write a Java Script function to validate username and password for a member ship form.

```
Ans:
```

}

```
FunctionvalidateForm(){
//Gettheusernameandpasswordinputvalues
 Varusername=document.forms["membershipForm"]["username"].value;
 Varpassword=document.forms["membershipForm"]["password"].value;
 //Validateusername
 If(username==""){
  Alert("Usernamemustbefilledout");
  Returnfalse;
 }
 //Validatepassword
 If(password==""){
  Alert("Passwordmustbefilledout");
  Returnfalse;
 }
//Returntrueifbothusernameandpasswordarevalid Returntrue;
```

Q. 2) Create your own transactions dataset and apply the above process on your dataset.

```
Ans:
Items=['item1','item2','item3','item4']
Transactions=[['item1','item2','item3'],
  ['item2','item3'],
  ['item1','item2','item4'],
  ['item1','item4'],
  ['item2','item3','item4'],
  ['item1','item3','item4'],
  ['item1','item2'],
  ['item1','item3'],
  ['item3','item4'],
  ['item2','item4']
]
From mlx tend. preprocessing import Transaction Encoder\\
Frommlxtend.frequent_patternsimportapriori,association_rules
#Convertthetransactionsintoabinarymatrix
Te=TransactionEncoder()
Te_ary=te.fit_transform(transactions)
#ConvertthebinarymatrixintoapandasDataFrame
Df=pd.DataFrame(te_ary,columns=te.columns_)
\#Generate frequent items ets with a minimum support of 0.3
Frequent_itemsets=apriori(df,min_support=0.3,use_colnames=True)
#Generateassociationruleswithaminimumconfidenceof0.7
```

Association_rules=association_rules(frequent_itemsets,metric="confidence", min_threshold=0.7)

#Printthefrequentitemsetsandassociationrules

Print(frequent_itemsets)

Print(association_rules)

<u>Slip-10</u>

10

```
$("p").after("Textinsertedaftertheparagraph."); });
</script>
</body>
</html>
```

 ${\tt Q2)}. Create the following dataset in python \& Convert the categorical values into numeric format. Apply a convertible convertible categorical values in the categorical values in the categorical value values in the categorical values in the categorical value value values in the categorical values in the categori$

 $The apriorial gorithm on the above dataset to generate the frequent items et sand association\ rules. Repeat$

 $The process with different min_supvalues.$

```
TID= \{1: ["eggs","milk","bread"], 2= ["eggs","apple"], 3= ["milk","bread"], 4= ["apple","milk"], 5= ["milk","apple","bread"] \}
```

Ans:

Importpandasaspd

From mlx tend. preprocessing import Transaction Encoder

Frommlxtend.frequent_patternsimportapriori,association_rules

#Createthedataset

```
Dataset={
    1:["eggs","milk","bread"],
    2:["eggs","apple"],
    3:["milk","bread"],
    4:["apple","milk"],
    5:["milk","apple","bread"]
}
```

 ${\tt \#Convert} categorical values into numeric format$

Te=TransactionEncoder()

```
Te_ary=te.fit(dataset.values()).transform(dataset.values())

Df=pd.DataFrame(te_ary,columns=te.columns_)

#ApplyApriorialgorithmtogeneratefrequentitemsetsandassociationrules

Min_sup=0.4

Frequent_itemsets=apriori(df,min_support=min_sup,use_colnames=True)

Association_rules=association_rules(frequent_itemsets,metric="confidence", min_threshold=0.6)

#Printthefrequentitemsetsandassociationrules Print("FrequentItemsets:\n",frequent_itemsets)

Print("\nAssociationRules:\n",association_rules)
```

Q.1)WriteaJavascriptprogramtoacceptnameofstudent, changefontcolortored, fontsize to 18 if Studentnameispresentotherwiseonclicking onempty text box displayimage which changes its size (Useonblur, onload, on mouse hover, on mouse click, on mouse up) Ans:

```
<!DOCTYPEhtml>
<html>
<head>

<title>JavaScriptExample</title> <style>

#name{

Font-size:14px;

Color:black;

}

</style>
</head> <body>
```

-11

```
<inputtype="text"id="name"onblur="changeStyle()"onmouseover="changeSize()"</pre>
onmouseout="resetSize()"onmousedown="changeColor()"onmouseup="resetColor()">
            <imgid="img"src=https://via.placeholder.com/150onload="changeImageSize()">
       <script>
               FunctionchangeStyle(){
                      Letname=document.getElementById("name").value;
                      If(name){
                                     Document.getElementById("name").style.fontSize="18px";
                              Document.getElementById("name").style.color="red";
                      }else{
                                    Document.getElementById("img").style.display="block";
                      }
               }
               FunctionchangeSize(){
                      Document.getElementById("name").style.fontSize="16px";
               }
               FunctionresetSize(){
                      Document.getElementById("name").style.fontSize="14px";
               }
               FunctionchangeColor(){
                      Document.getElementById("name").style.color="blue";
               }
               FunctionresetColor(){
                      Document.getElementById("name").style.color="red";
```

```
}
                                                                                                         FunctionchangeImageSize(){
                                                                                                                                                             Document.getElementById("img").style.width="200px";
                                                                                                                                                             Document.getElementById("img").style.height="200px";
                                                                                                         }
                                                      </script>
  </body>
  </html>
  Q2). Create the above dataset in python \& Convert the categorical values into numeric format. Apply a convertible convertibl
  The apriorial gorithm on the above dataset to generate the frequent items ets and association rules. Repeat the frequent items are the frequent items and the frequent items are the frequent items are the frequent items are the frequent items and the frequent items are the 
  The process with different min\_supvalues.\\
TID={1:["butter","bread","milk],2=["butter","flour","milk","suger"],3=["butter","eggs","milk","salt"],4=
  ["eggs"],5=["butter","flour","milk","salt"]}
  Ans:
  Importpandasaspd
  From mlx tend. preprocessing import Transaction Encoder\\
   Frommlxtend.frequent_patternsimportapriori,association_rules
  #Creatingthedataset
```

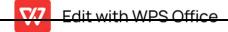
Dataset=[['butter','bread','milk'],['butter','flour','milk','sugar'],['butter','eggs','milk','salt'], ['eggs'],['butter','flour','milk','salt']] Df=pd.DataFrame(dataset) #Convertingthecategoricalvaluesintonumericformat Te=TransactionEncoder() Te_ary=te.fit(dataset).transform(dataset) Df=pd.DataFrame(te_ary,columns=te.columns_) $\#Generating frequent itemsets using Apriorial gorithm with different min_supvalues$ Min_sup_values=[0.4,0.3,0.2] Formin_supinmin_sup_values: Frequent_itemsets=apriori(df,min_support=min_sup,use_colnames=True) Print("FrequentItemsetswithminimumsupportof",min_sup) Print(frequent_itemsets) #Generatingassociationrules Rules=association_rules(frequent_itemsets,metric="confidence",min_threshold=0.7)

Print("AssociationRuleswithminimumsupportof",min_sup) Print(rules)

@ Slip-12

-12

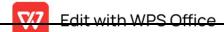
Q.1)WriteAJAXprogramtoreadcontact.datfileandprintthecontentsofthefileinatabular format



```
When the user clicks on print button. Contact. dat files hould contain srno, name, residence number,
Mobilenumber, Address. [Enteratleast3recordincontact.datfile]
Ans:
Htmlfile
<<!DOCTYPEhtml>
<html>
<head>
      <title>ContactList</title>
      <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script>
      <scriptsrc="script.js"></script>
</head> <body>
      <buttonid="printBtn">PrintContacts/button>
      <br><br><
      <tableid="contactTable"> <thead>
                    Sr.No.
                           Name
                            ResidenceNumber
                           MobileNumber
                           Address
                    </thead> 
                    <!—Contactlistwillbedisplayedhere?
             </body>
```

```
</html>
Ajaxfile
$(document).ready(function(){
       //Eventlistenerforprintbutton $("#printBtn").click(function(){
               //AJAXrequesttoreadcontact.datfile
               $.ajax({ url:"contact.dat",
                       dataType:"text",
                       success:function(data){
                                  //Splitthefilecontentsintolines
                              Varlines=data.split("\n");
                                   //Iterateovereachlineandcreateatablerow
                               VartableRows="";
                                   For(vari=0;i<lines.length;i++){
                                         Varcolumns=lines[i].split(",");
                                      If(columns.length==5){//Onlyprocessvalidrows
                                              tableRows+=""; for(varj=0;j<columns.length;j++){
                                              tableRows+=""+columns[j]+"";
                                                tableRows+="";
                                      }
                              }
                                  //Addthetablerowstothetablebody
                                 $("#contactTabletbody").html(tableRows);
                       },
                          Error:function(jqXHR,textStatus,errorThrown){
                                 Alert("Error:"+errorThrown);
```

```
}
                                                  });
                        });
});
Q.2)Create'heights-and-weights'Dataset.Buildalinearregressionmodelbyidentifying independent
And target variable. Split the variable sint otraining and testing sets and print them. Build a simple linear print them are the variable simple linear print them. The variable simple linear print the variable simple simpl
Regression model for predicting purchases.\\
Ans:
Importnumpyasnp
Importpandasaspd
Fromsklearn.linear_modelimportLinearRegression
Fromsklearn.model_selectionimporttrain_test_split
#Createarandomdatasetwith10samples
Heights=np.random.normal(170,10,10)
Weights=np.random.normal(70,5,10)
#Combinethetwoarraysintoasingledataset
Dataset=pd.DataFrame({'Height':heights,'Weight':weights}) #Splitthedatasetintotrainingandtestingsets
X_train,X_test,y_train,y_test=train_test_split(dataset['Height'],dataset['Weight'],test_size=0.2,
random state=42)
{\tt \#CreateaLinearRegression model and fit it to the training data}
Lr_model=LinearRegression()
Lr_model.fit(X_train.values.reshape(-1,1),y_train)
```



```
#Printthemodelcoefficients
Print('ModelCoefficients:',lr_model.coef_)

#Predicttheweightsforthetestdataandprintthepredictions
Y_pred=lr_model.predict(X_test.values.reshape(-1,1))
Print('Predictions:',y_pred)
```

Slip-13

13

Q.1)WriteAJAXprogramwheretheuserisrequestedtowritehisorhernameinatextbox, and the Serverkeepssendingbackresponses while the user is typing. If the username is not entered then the Message displayed will be, "Stranger, please tell meyour name!". If the name is Rohit, Virat, Dhoni, Ashwinor Harbhajan, the server responds with "Hello, master!". If the name is anything else, the Message will be ", Idon't knowyou!".

```
<inputtype="text"id="name"name="name">
        <divid="response"></div>
        <scriptsrc="ajax.js"></script>
</body>
</html>
Ajaxfile
$(document).ready(function(){
       //Attachaneventlistenertothenameinputfield $('#name').on('input',function(){
               //Getthenameenteredbytheuser Varname=$(this).val();
               //SendanAJAXrequesttotheserver
               $.ajax({
                       url:'server.php', type:'POST',
                       data:{name:name},
                       success:function(response){
                              //Updatetheresponsedivwiththeserver'sresponse
                                 $('#response').html(response);
                       }
               });
       });
});
Filename:Server.php
```

```
<?php
//Getthenameenteredbytheuser
$name=$_POST['name'];
//Checkifthenameisempty
If(empty($name)){
                            Echo'Stranger,pleasetellmeyourname!';
}
//Checkifthenameisoneofthemasternames
Elseif($name=='Rohit'||$name=='Virat'||$name=='Dhoni'||$name=='Ashwin'||$name== 'Harbhajan'){
                            Echo'Hello,master!';
}
//Otherwise,theserverdoesn'tknowtheuser
Else{
                            Echo$name.',Idon\'tknowyou!';
}
Q.2)DownloadnurserydatasetfromUCI.Buildalinearregressionmodelbyidentifying independent
And target variable. Split the variables into training and testing sets and print them. Build a simple linear printing and the printing and 
Regressionmodelforpredictingpurchases.
Ans:
Importpandasaspd
 Importnumpyasnp
 Fromsklearn.model_selectionimporttrain_test_split
 Fromsklearn.linear_modelimportLinearRegression
```

```
#Loadthedataset
url=https://archive.ics.uci.edu/ml/machine-learning-databases/nursery/nursery.data
names=['parents','has_nurs','form','children','housing','finance','social','health','class']
dataset=pd.read_csv(url,names=names)
#Identifyindependentandtargetvariables
X=dataset.drop('class',axis=1)
Y=dataset['class']
#Convertcategoricalvariablesintonumericalvariablesusingone-hotencoding
X=pd.get_dummies(X)
#Splitintotrainingandtestingsets
X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.2,random_state=42)
#Buildalinearregressionmodel
Model=LinearRegression() Model.fit(X_train,y_train)
#Printthecoefficientsofthemodel
Print("Intercept:",model.intercept_)
Print("Coefficients:",model.coef_)
#Predictthetargetvariableforthetestingset
Y_pred=model.predict(X_test)
#EvaluatethemodelusingMeanSquaredError(MSE)
Mse=np.mean((y_test-y_pred)**2)
```

Print("MSE:",mse)

Slip-14

-14

Q.1)CreateTEACHERtableasfollowsTEACHER(tno,tname,qualification,salary).WriteAjax Program to select at each ers name and print the select ed teachers details.AAns: Jsfile <!DOCTYPEhtml> <html> <head> <title>TeacherDetails</title> <scriptsrc=https://code.jquery.com/jquery-3.6.0.min.js></script> </head> <body> <selectid="teacher-list"> <optionvalue="">--SelectTeacher--</option> <optionvalue="1">JohnDoe</option> <optionvalue="2">JaneSmith</option> <optionvalue="3">BobJohnson</option> </select> <buttonid="submit-btn">GetDetails/button> <divid="details"></div> <script> \$(document).ready(function(){ \$('#submit-btn').click(function(){ Vartno=\$('#teacher-list').val(); If(tno=="){

```
Alert('Pleaseselectateacher.');
                                       Return;
                              }
                              $.ajax({ url:'teacherdetails.php',
                                      method:'POST', data:{tno:tno},
                                      success:function(response){
                                                  $('#details').html(response);
                                       },
                                            Error:function(xhr,status,error){
                                                   Console.log(xhr.responseText);
                                       }
                              });
                       });
               });
       </script>
</body>
</html>
Phpfileteacherdetails.php
<?php
//Connecttodatabase
$servername="localhost";
$username="username";
$password="password";
$dbname="database_name";
$conn=mysqli_connect($servername,$username,$password,$dbname);
//Checkconnection
```

```
If(!$conn){
  Die("Connectionfailed:".mysqli_connect_error());
}
//Retrieveselectedteacherdetails
If(isset($_POST['tno'])){
        $tno=$_POST['tno'];
        $sql="SELECT*FROMTEACHERWHEREtno='$tno'"; $result=mysqli_query($conn,$sql);
        If(mysqli_num_rows($result)>0){
               $row=mysqli_fetch_assoc($result);
               Echo"TeacherName: ".$row['tname']." < br>";
               Echo"Qualification: ".$row['qualification']. "<br>";
               Echo"Salary:".$row['salary']."<br>";
        }else{
               Echo"Nodatafound.";
        }
}
//Closedatabaseconnection
Mysqli_close($conn);
?>
```

 $Q. 2) Create the following dataset in python \& Convert the categorical values into numeric format. Apply The apriorial gorithm on the above dataset to generate the frequent items et sand association rules. Repeat The process with different min_sup_values.$

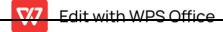
```
TID={1:["apple","mango","banana"],2=["mango","banana",
"cabbage","carrots"],3=["mango","banana",carrots"],4=["mango","carrots"]}AAAns:
Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori
#Createthedataset
TID={1:["apple","mango","banana"],
    2:["mango","banana","cabbage","carrots"],
    3:["mango","banana","carrots"],
    4:["mango","carrots"]}
#Convertthecategoricalvaluesintonumericformat
Te=TransactionEncoder()
Te_ary=te.fit([TID[i]foriinTID]).transform([TID[i]foriinTID]) Df=pd.DataFrame(te_ary,columns=te.columns_)
#Applytheapriorialgorithmwithdifferentmin_supvalues
Min_sup_values=[0.25,0.5,0.75] Formin_supinmin_sup_values:
  Frequent_itemsets=apriori(df,min_support=min_sup,use_colnames=True)
  Print("Frequentitemsetswithmin_sup=",min_sup)
  Print(frequent_itemsets)
  Print("\n")
```

Slip-15

15

Q.1) Write A jax program to fetch suggestions when is user is typing in a text box. (eglike google and the program of the pr

Suggestions. Hint create array of suggestions and matching string will be displayed).



```
Ans:
<!DOCTYPEhtml>
<html>
<head>
       <title>AJAXAutoSuggestionsExample</title>
       <script>
               FunctionfetchSuggestions(str){
                       If(str.length==0){
                               Document.getElementById("suggestions").innerHTML=""; Return;
                       }
                       Varsuggestions=["apple","banana","cherry","dates","elderberry","fig",
"grape","honeydew","kiwi","lemon"];
                       Varmatches=[];
                       For(vari=0;i<suggestions.length;i++){</pre>
                               If(suggestions[i].toLowerCase().startsWith(str.toLowerCase())){
                                         Matches.push(suggestions[i]);
                               }
                       }
                       If(matches.length>0){
                               Document.getElementById("suggestions").innerHTML=
matches.join("<br>");
                       }else{
                               Document.getElementById("suggestions").innerHTML="No
suggestionsfound";
                       }
               }
       </script>
</head> <body>
       <inputtype="text"onkeyup="fetchSuggestions(this.value)">
```

```
<divid="suggestions"></div>
</body>
</html>
Q.2)Createthefollowingdatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply
The apriorial gorithmonthe above dataset to generate the frequent items et sand association rules. Repeat
The process with different min\_supvalues.
No | Company | model | year
 1.
        Tata. Nexon. 2017
 2.
        MG. Astor. 2021
 3.
                Seltos. 2019
        Kia.
 4.
        Hyundai. Creta. 2015
Ans:
Importpandasaspd
#Createthedataset
Data={'No':[1,2,3,4],
     'Company':['Tata','MG','Kia','Hyundai'],
     'Model':['Nexon','Astor','Seltos','Creta'],
     'Year':[2017,2021,2019,2015]}
Df=pd.DataFrame(data)
{\tt \#Convert} categorical values into numeric format
Df['Company']=pd.Categorical(df['Company'])
```

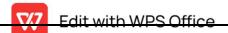
Df['Model']=pd.Categorical(df['Model'])

Df['Company']=df['Company'].cat.codes Df['Model']=df['Model'].cat.codes Print(df) Frommlxtend.frequent_patternsimportapriori Frommlxtend.frequent_patternsimportassociation_rules $\#Generate frequent itemsets with min_sup=0.5$ Frequent_itemsets=apriori(df,min_support=0.5,use_colnames=True) Print(frequent_itemsets) $\#Generate association rules with min_threshold = 0.7$ Association_rules=association_rules(frequent_itemsets,metric="confidence", min_threshold=0.7) Print(association_rules) Slip-16 16 $Q.1) Write Ajax program to get book details from XML file when users elect abook name. \ Create XML file when users elect abook name and the file when users elect abook name. \ Create XML file when users elect abook name and the file when users elect above name and the file when users elect abook name and the file whe$ Fileforstoringdetailsofbook(title,author,year,price). Ans: Xmlfilebook_details.xml <books> <book> <title>TheGreatGatsby</title>

```
<author>F.ScottFitzgerald</author>
                <year>1925</year>
                <price>10.99</price>
       </book> <book>
              <title>ToKillaMockingbird</title>
               <author>HarperLee</author>
                <year>1960</year>
                <price>8.99</price>
       </book> <book>
                <title>1984</title>
               <author>GeorgeOrwell</author>
                <year>1949</year>
                <price>6.99</price>
       </book> <book>
               <title>PrideandPrejudice</title>
               <author>JaneAusten</author>
                <year>1813</year>
                <price>7.99</price>
       </book>
</books>
Ajaxfile
<!DOCTYPEhtml>
<html>
<head>
       <title>BookDetails</title>
       <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script>
```

```
$(document).ready(function(){
                       $("select").change(function(){
                               Varbook=$(this).val();
                               $.ajax({ url:"book_details.xml",
                                       dataType:"xml",
                                       success:function(xml){
                                               $(xml).find('book').each(function(){
                                                             Vartitle=$(this).find('title').text();
                                                          If(title==book){
                                                                Varauthor=
$(this).find('author').text();
                                                                     Varyear=$(this).find('year').text();
                                                                     Varprice=$(this).find('price').text();
                                                               $("#details").html("Author:"+author
+"<br>Year:"+year+"<br>Price:"+price);
                                                        }
                                                });
                                       }
                               });
                       });
               });
        </script>
</head> <body>
        <select>
               <option>Selectabook</option>
                <option>TheGreatGatsby
                <option>ToKillaMockingbird</option>
                <option>1984</option>
                <option>PrideandPrejudice</option>
```

</select> <divid="details"></div> </body> </html> Q2).Consideranytextparagraph.Preprocessthetexttoremoveanyspecialcharactersand digits. Generate the summary using extractive summarization pprocess.Ans: Importre Importnitk Fromnltk.corpusimportstopwords Fromnltk.tokenizeimportsent_tokenize,word_tokenize Fromheapqimportnlargest #Sampletextparagraphyoucanwriteanytext Text="Naturallanguageprocessing(NLP)isasubfieldoflinguistics,computerscience, informationengineering, and artificial intelligence concerned with the interactions between computers and human languages, in particular how to program computers to process and a computer stop andanalyzelargeamountsofnaturallanguagedata. Challengesinnaturallanguageprocessing frequentlyinvolvespeechrecognition, natural language understanding, and natural language generation. The history of natural language processing generally started in the 1950s, although workcanbefoundfromearlierperiods." #Removespecialcharactersanddigits Text=re.sub('[^a-zA-Z]','',text) #Tokenizethetextintosentences Sentences=sent_tokenize(text) #Tokenizeeachsentenceintowordsandremovestopwords



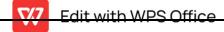
Stop_words=set(stopwords.words('english'))

```
Words=[]
Forsentenceinsentences:
  Words.extend(word_tokenize(sentence))
Words=[word.lower()forwordinwordsifword.lower()notinstop_words]
#Calculatewordfrequency
Word_freq=nltk.FreqDist(words)
#Calculatesentencescoresbasedonwordfrequency
Sentence_scores={}
Forsentenceinsentences:
  Forwordinword_tokenize(sentence.lower()):
    Ifwordinword_freq:
      Iflen(sentence.split("))<30:
         Ifsentencenotinsentence_scores:
         Sentence_scores[sentence]=word_freq[word] Else:
           Sentence_scores[sentence]+=word_freq[word]
#Generatesummarybyselectingtop3sentenceswithhighestscores
Summary_sentences=nlargest(3,sentence_scores,key=sentence_scores.get)
Summary=".join(summary_sentences)
Print(summary)
```

<u>Slip-17</u>

17

Q.1)WriteaJavaScriptProgramtoshowHelloGoodMorningmessageonloadeventusing alertbox



```
And display the Student registration from.\\
Ans:
<!DOCTYPEhtml>
<html>
<head>
       <title>StudentRegistrationForm</title> <script>
              Window.onload=function(){
                      Alert("HelloGoodMorning!");
              };
       </script>
</head> <body>
       <h1>StudentRegistrationForm</h1>
       <form>
              <labelfor="name">Name:</label>
               <inputtype="text"id="name"name="name"required><br><br>
              <labelfor="email">Email:</label>
               <inputtype="email"id="email"name="email"required><br><br>
              <labelfor="phone">Phone:</label>
              <inputtype="tel"id="phone"name="phone"required><br><br>
              <labelfor="address">Address:</label>
              <textareaid="address"name="address"required></textarea><br><br>
              <inputtype="submit"value="Submit">
       </form>
</body>
</html>
```

Q.2)Considertextparagraph.So,keepworking.Keepstriving.Nevergiveup.Falldownseven times,get Upeight.Easeisagreaterthreattoprogressthanhardship.Easeisagreaterthreattoprogress than Hardship.So,keepmoving,keepgrowing,keeplearning.Seeyouatwork.Preprocessthetextto remove Anyspecialcharactersanddigits.Generatethesummaryusingextractivesummarization process. Ans:

Importre

Fromnltk.tokenizeimportsent_tokenize

#Textparagraph

Text="So,keepworking.Keepstriving.Nevergiveup.Falldownseventimes,getupeight.Ease isagreaterthreattoprogressthanhardship.Easeisagreaterthreattoprogressthanhardship. So,keepmoving,keepgrowing,keeplearning.Seeyouatwork."

#Removespecialcharactersanddigits

Text=re.sub('[^A-Za-z]+','',text)

#Tokenizethesentences

Sentences=sent_tokenize(text)

#Calculatethescoreofeachsentencebasedonthenumberofwords

#Thesentenceswithmorewordswillhaveahigherscore

Scores={}

Forsentenceinsentences:

Words=sentence.split()

Score=len(words)

Scores[sentence]=score

#Sortthesentencesbasedontheirscores

Sorted_sentences=sorted(scores.items(),key=lambdax:x[1],reverse=True)

```
#Extractthetop2sentenceswiththehighestscoresasthesummary
Summary_sentences=[sentence[0]forsentenceinsorted_sentences[:2]]
Summary="".join(summary_sentences)
#Printthesummary Print(summary)
```

<u>Slip-18</u>

```
-18
Q.1) Write a Java Script Program to print Fibonacci numbers on on click event.\\
Ans:
<!DOCTYPEhtml>
<html>
<head>
       <title>FibonacciNumbers</title>
       <script>
               FunctiongenerateFibonacci(){
                       //Gettheinputvaluefromtheuser
                       Varinput=document.getElementById("inputNumber").value;
                       Varoutput=document.getElementById("output");
                       //Converttheinputtoanumber Varn=parseInt(input);
                       //CreateanarraytostoretheFibonaccisequence
                       Varfib=[];
```

```
//CalculatetheFibonaccisequenceupton
                      Fib[0]=0;
                      Fib[1]=1;
                      For(vari=2;i<=n;i++){
                              Fib[i]=fib[i-1]+fib[i-2];
                      }
                      //DisplaytheFibonaccisequence
                      Output.innerHTML="Fibonaccisequenceupto"+n+":"+fib.join(",");
               }
       </script>
</head> <body>
       <h1>FibonacciNumbers</h1>
       Enteranumber:
       <inputtype="text"id="inputNumber">
       <buttononclick="generateFibonacci()">GenerateFibonacci</button> <pid="output">
</body>
</html>
Q.2)Consideranytextparagraph.Removethestopwords.Tokenizetheparagraphtoextract wordsand
Sentences. Calculate the word frequency distribution and plot the frequencies. Plot the
wordcloudofthe Txt.
Ans:
#Installthelibraries
!pipinstallnltkmatplotlibwordcloud
```

#Importthenecessarymodules

Importnitk

Fromnltk.corpusimportstopwords

Fromnltk.tokenizeimportword_tokenize,sent_tokenize

Fromnltk.probabilityimportFreqDist

Importmatplotlib.pyplotasplt

FromwordcloudimportWordCloud

#Downloadthestopwordscorpus

Nltk.download('stopwords')

#Definethetextparagraph

Text="Loremipsumdolorsitamet,consecteturadipiscingelit.Sedtristiqueanteetvelit vestibulum,velpharetraorciiaculis.Nullammattisrisusquisauguetinciduntrhoncus.Morbi varius,arcuvitaescelerisquelaoreet,magnaestimperdietquam,sitametultriceslectusjustoid enim.Seddictumsuscipitcommodo.Sedmaximusconsequatrisus,necpharetranibh interdumquis.Etiamegetquamvelauguedictumdignissimsitametnecelit.Nuncatsapien dolor.Nullavitaeiaculislorem.Suspendissepotenti.Sednonanteturpis.Morbiconsectetur, arcuavestibulumsuscipit,mauriserosconvallisnibh,necfeugiatorcienimsitametenim. Aliquameratvolutpat.Etiamvelnisiidnequeviverradapibusnonnonlectus."

#Tokenizetheparagraphtoextractwordsandsentences

Words=word_tokenize(text.lower())

Sentences=sent_tokenize(text)

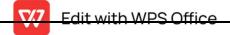
#Removethestopwordsfromtheextractedwords

Stop_words=set(stopwords.words('english'))

Filtered_words=[wordforwordinwordsifword.casefold()notinstop_words]

Calculate the word frequency distribution and plot the frequencies using matplot libution and plot the frequency distribution and plot

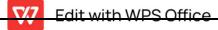
Fdist=FreqDist(filtered_words)



```
Fdist.plot(30,cumulative=False)
Plt.show()
#Plotthewordcloudofthetextusingwordcloud
Wordcloud=WordCloud(width=800,height=800,
         Background_color='white',
         Stopwords=stop_words,
         Min_font_size=10).generate(text)
#plottheWordCloudimage
Plt.figure(figsize=(8,8),facecolor=None)
Plt.imshow(wordcloud)
Plt.axis("off")
Plt.tight_layout(pad=0)
Plt.show()

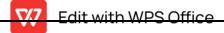
<u>Slip-19</u>

-19
Q. 1) Write a Java Script Program to validate username and password on on Submit event.\\
Ans:
<!DOCTYPEhtml>
<html>
 <head>
  <title>ValidateUserNameandPassword</title>
  <script>
```



```
FunctionvalidateForm(){
    Varusername=document.forms["myForm"]["username"].value;
    Varpassword=document.forms["myForm"]["password"].value;
    If(username==""){
     Alert("Usernamemustbefilledout");
     Returnfalse;
    }
    If(password==""){
     Alert("Passwordmustbefilledout");
     Returnfalse;
    }
   }
  </script>
 </head>
 <body>
  <h2>ValidateUserNameandPassword</h2>
  <formname="myForm"onsubmit="returnvalidateForm()"method="post">
   <labelfor="username">Username:</label>
   <inputtype="text"id="username"name="username"><br><br>
   <labelfor="password">Password:</label>
   <inputtype="password"id="password"name="password"><br><br>
   <inputtype="submit"value="Submit">
  </form>
 </body>
</html>
```

 $Q.2) Download the movie_review.csv dataset from Kagglebyusing the following link and the state of the control of the control$:https://www.kaggle.com/nltkdata/movie-review/version/3?select=movie_review.csvto perform Sentimentanalysisonabovedatasetandcreateawordcloud. Ans: Importpandasaspd FromtextblobimportTextBlob From word cloud import Word Cloud, STOP WORDSImportmatplotlib.pyplotasplt #Loadthedataset Df=pd.read_csv('movie_review.csv') #AddacolumnforsentimentanalysisusingTextBlob Df['Sentiment']=df['Review'].apply(lambdax:TextBlob(x).sentiment.polarity) #Createanewdataframeforpositivereviewsonly Pos_df=df[df['Sentiment']>0.2] #Createawordcloudforpositivereviews Wordcloud=WordCloud(width=800,height=800, Background_color='white', Stopwords=STOPWORDS, Min_font_size=10).generate(".join(pos_df['Review'])) #Plotthewordcloud Plt.figure(figsize=(8,8),facecolor=None) Plt.imshow(wordcloud) Plt.axis("off")



```
Plt.tight_layout(pad=0)
```

Plt.show()

@ Slip-20

-20

Q. 1) create a student. xml file containing at least 5 student information.

```
Ans:
<?xmlversion="1.0"?>
<students>
 <student>
  <name>JohnDoe</name>
  <age>21</age>
  <gender>Male</gender>
  <major>ComputerScience</major>
  <gpa>3.8</ppa>
 </student>
 <student>
  <name>JaneSmith</name>
  <age>19</age>
  <gender>Female/gender>
  <major>Business</major>
  <gpa>3.5</ppa>
 </student>
 <student>
```

<name>TomJohnson</name>

```
<age>20</age>
 <gender>Male</gender>
 <major>Engineering</major>
 <gpa>3.2</gpa>
</student>
<student>
 <name>SaraLee</name>
 <age>22</age>
 <gender>Female/gender>
 <major>Psychology</major> <gpa>3.6</gpa>
</student>
<student>
 <name>MikeBrown</name>
 <age>18</age>
 <gender>Male/gender>
 <major>Education</major>
 <gpa>3.4</gpa>
</student> </students>
```

Q.2)Considertextparagraph."""Helloall,WelcometoPythonProgrammingAcademy.Python
ProgrammingAcademyisaniceplatformtolearnnewprogrammingskills.Itisdifficulttoget enrolled
InthisAcademy."""Removethestopwords.

Ans:

Importnitk

Fromnltk.corpusimportstopwords Nltk.download('stopwords')

```
#Textparagraph
Text="Helloall, Welcometo Python Programming Academy. Python Programming Academy is
 an iceplat form to learn new programming skills. It is difficult to get enrolled in this Academy. {\it ''}
#Tokenizethetext
Tokens=nltk.word_tokenize(text)
#Removestopwords
Stop_words=set(stopwords.words('english'))
Filtered_tokens=[wordforwordintokensifnotword.lower()instop_words]
#Printthefilteredtokens Print(filtered_tokens)
@ Slip-21
21
Q.1) Adda Java Script File in Code igniter. The Java script code should check whether a number is a support of the property 
Positiveornegative.
Ans:
Htmlfile
<!DOCTYPEhtml>
<html>
        <head>
               <title>NumberCheck</title>
               <scriptsrc="<?phpechobase_url('js/numberCheck.js');?>"></script>
        </head>
```

```
<body>
   <h1>NumberCheck</h1>
   Enteranumbertocheck:
   <inputtype="number"id="num"/>
   <buttononclick="checkNumber(document.getElementById('num').value)">Check</button>
 </body>
</html>
Createisfilechecknumber.js
FunctioncheckNumber(num){
 If(num>0){
   Alert("Thenumberispositive.");
 }elseif(num<0){
   Alert("Thenumberisnegative.");
 }else{
   Alert("Thenumberiszero.");
 }
}
Q.2) Build a simple linear regression model for User Data.
Ans:
Importpandasaspd
Fromsklearn.model_selectionimporttrain_test_split
From sklearn. linear\_model import Linear Regression
Fromsklearn.metricsimportmean_squared_error,r2_score
Importmatplotlib.pyplotasplt
```

#1.Collectdata Data=pd.read_csv('user_data.csv') #2.Preprocessdata Data.dropna(inplace=True) X=data['age'].values.reshape(-1,1) Y=data['income'].values.reshape(-1,1) #3.Splitdata X_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.2,random_state=0) #4.Trainthemodel Regressor=LinearRegression() Regressor.fit(x_train,y_train) #5.Predictvalues Y_pred=regressor.predict(x_test) #6.Evaluatemodel Mse=mean_squared_error(y_test,y_pred) R2=r2_score(y_test,y_pred) Print("Meansquarederror:",mse) Print("R-squared:",r2) #7. Visualizeresults Plt.scatter(x_test,y_test,color='gray')



Plt.plot(x_test,y_pred,color='red',linewidth=2) Plt.show()

-22

```
Q.1) Create at a ble student having attributes (rollno, name, class). Using code igniter, connect to the light of the control of the contro
 Databaseandinsert5recodesinit.
Ans:
<?php
//EstablishconnectiontoPostgreSQLdatabase
$conn=pg_connect("host=localhostdbname=your_database_nameuser=your_username
 password=your_password");
//Checkifconnectionwassuccessful
If(!$conn){
          Echo"Connectionfailed.";
          Exit;
}
//Createstudenttable
$query="CREATETABLEstudent(
                             RollnoINTEGERPRIMARYKEY,
                             NameVARCHAR(50)NOTNULL,
                             ClassVARCHAR(10)NOTNULL
                  )";
$result=pg_query($conn,$query);
If(!$result){
          Echo"Errorcreatingtable:".pg_last_error($conn);
          Exit;
}else{
          Echo"Tablecreatedsuccessfully.<br>";
```

```
}
//Insert5recordsintostudenttable
$insert_query="INSERTINTOstudent(rollno,name,class)
            VALUES(1,'JohnDoe','10A'),
                (2,'JaneSmith','9B'),
                   (3,'BobJohnson','11C'),
                (4, 'SarahLee', '12D'),
                (5,'TomBrown','8E')";
$insert_result=pg_query($conn,$insert_query);
If(!$insert_result){
  Echo"Errorinsertingrecords:".pg_last_error($conn);
  Exit;
}else{
  Echo"Recordsinsertedsuccessfully.";
}
//Closedatabaseconnection
Pg_close($conn);
?>
Q2). Consider any text paragraph. Remove the stop words.
Ans:
Importnltk
```

Fromnltk.corpusimportstopwords Fromnltk.tokenizeimportword_tokenize
#sampletextparagraph Text="Helloall,WelcometoPythonProgrammingAcademy.PythonProgrammingAcademyis"
aniceplatformtolearnnewprogrammingskills.ItisdifficulttogetenrolledinthisAcademy."
#tokenizethetextparagraph
Words=word_tokenize(text)
#definestopwords
Stop_words=set(stopwords.words('english'))
#removestopwords
Filtered_words=[wordforwordinwordsifword.casefold()notinstop_words]
#joinfilteredwordstoformasentence
Filtered_sentence=".join(filtered_words)
Print(filtered_sentence)
@ Slip-23
-23
$Q.1) Create at a ble studenth a ving attributes (roll no, name, class) containing at least 5 recodes. \ Using$
Codeigniter, displayallits records.
Ans:

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```
<?php
//EstablishconnectiontoPostgreSQLdatabase
$conn=pg_connect("host=localhostdbname=your_database_nameuser=your_username
password=your_password");
//Checkifconnectionwassuccessful
If(!$conn){
  Echo"Connectionfailed.";
  Exit;
}
//Createstudenttable
$query="CREATETABLEstudent(
       RollnoINTEGERPRIMARYKEY,
       NameVARCHAR(50)NOTNULL,
       ClassVARCHAR(10)NOTNULL
    )";
$result=pg_query($conn,$query);
If(!$result){
  Echo"Errorcreatingtable:".pg_last_error($conn);
  Exit;
}else{
  Echo"Tablecreatedsuccessfully.<br>";
}
//Insert5recordsintostudenttable
$insert_query="INSERTINTOstudent(rollno,name,class) VALUES(1,'JohnDoe','10A'),
```

```
(2, 'JaneSmith', '9B'),
                (3, 'BobJohnson', '11C'),
                (4, 'SarahLee', '12D'),
                (5, 'TomBrown', '8E')";
$insert_result=pg_query($conn,$insert_query);
If(!$insert_result){
  Echo"Errorinsertingrecords: ".pg_last_error($conn); Exit;
}else{
  Echo"Recordsinsertedsuccessfully.";
}
//Closedatabaseconnection
Pg_close($conn);
//functiontodisplaydatabaserecords
Functiondisplay_records($table_name){
  //establishconnectiontoPostgreSQLdatabase
  $conn=pg_connect("host=localhostdbname=your_database_nameuser=your_username
password=your_password");
  //checkifconnectionwassuccessful
  If(!$conn){
     Echo"Connectionfailed.";
     Exit;
```

```
//retrieverecordsfromspecifiedtable
  $query="SELECT*FROM".$table_name; $result=pg_query($conn,$query);
  //checkifquerywassuccessful
  If(!$result){
    Echo"Errorretrievingrecords:".pg_last_error($conn); Exit;
  }
  //displayrecordsinanHTMLtable
  Echo"";
  Echo"RollNoNameClass";
  While($row=pg_fetch_assoc($result)){
    Echo"".$row['rollno']."".$row['name']."".$row['class']."";
  }
  Echo"";
  //closedatabaseconnection Pg_close($conn);
}
?>
Q2).Consideranytextparagraph.Preprocessthetexttoremoveanyspecialcharactersand Digits.
Ans:
Importre
Text="Hello,#world123!Thisisasampletextparagraph.ltcontainsspecialcharactersand5 digits."
#Removespecialcharactersanddigits
```

Processed_text=re.sub(r'[^a-zA-Z\s]',",text)

Print(processed_text)

Slip-24

-24

Q.1)WriteaPHPscripttocreatestudent.xmlfilewhichcontainsstudentrollno,name,address, college Andcourse.Printstudentsdetailofspecificcourseintabularformatafteracceptingcourseas input. Ans:

```
<?php
//Definestudentdetails
$students=array(
    Array("rollno"=>1,"name"=>"JohnDoe","address"=>"123MainSt","college"=>"ABC
College","course"=>"ComputerScience"),
    Array("rollno"=>2,"name"=>"JaneSmith","address"=>"456MainSt","college"=>"DEF
    College","course"=>"InformationTechnology"),
    Array("rollno"=>3,"name"=>"BobJohnson","address"=>"789MainSt","college"=>"GHI
College","course"=>"BusinessAdministration"),
    Array("rollno"=>4,"name"=>"SarahLee","address"=>"101MainSt","college"=>"JKL
College","course"=>"Marketing"),
    Array("rollno"=>5,"name"=>"TomBrown","address"=>"121MainSt","college"=>"MNO
College","course"=>"ComputerScience"));
//CreateaSimpleXMLElementobject
$xml=newSimpleXMLElement('<students></students>');
```

```
//AddstudentelementstotheXMLobject
Foreach($studentsas$student){
  $student_element=$xml->addChild('student');
  $student_element->addChild('rollno',$student['rollno']); $student_element-
  >addChild('name',$student['name']);
  $student_element->addChild('address',$student['address']);
  $student_element->addChild('college',$student['college']);
  $student_element->addChild('course',$student['course']);
}
//SavetheXMLdatatoafile
$xml->asXML('student.xml');
//Getcourseinputfromuser
$course=isset($_POST['course'])?$_POST['course']:";
//LoadtheXMLfile
$xml=simplexml_load_file('student.xml');
//Findstudentswithmatchingcourse
$filtered_students=$xml->xpath("//student[course='$course']");
//Printtableofmatchingstudents
Echo"<tableborder='1'>";
Echo"Roll
NoNomeAddressCollegeCourse";
Foreach($filtered_studentsas$student){
  Echo"";
  Echo"{$student->rollno}"; Echo"{$student->name}";
  Echo"{$student->address}";
```

```
Echo"{$student->college}";
  Echo"{$student->course}";
  Echo"";
}
Echo"";
?>
Q.2)Considerthefollowingdataset:
https://www.kaggle.com/datasets/datasnaek/youtubenew?select=INvideos.csv
WriteaPythonscriptforthefollowing: i.
Readthedatasetandperformdatacleaningoperationsonit. ii.
ii. Find the total views, total likes, total dislikes and comment count.\\
Ans:
Importpandasaspd
#Readthedataset
Df=pd.read_csv('INvideos.csv')
#Dropthecolumnsthatarenotrequired
Df=df.drop(['video_id','trending_date','channel_title','category_id','publish_time','tags',
'thumbnail_link', 'comments_disabled', 'ratings_disabled', 'video_error_or_removed'], axis=1)
#Convertthedatatypeof'views', 'likes', 'dislikes', and 'comment_count' to integer
Df[['views', 'likes', 'dislikes', 'comment_count']]=df[['views', 'likes', 'dislikes', 'comment_count']].astype(int)
#Findthetotalviews,likes,dislikes,andcommentcount
Total_views=df['views'].sum()
```

```
Total_likes=df['likes'].sum()
Total_dislikes=df['dislikes'].sum()
Total_comments=df['comment_count'].sum()
Print('TotalViews:',total_views)
Print('TotalLikes:',total_likes)
Print('TotalDislikes:',total_dislikes)
Print('TotalComments:',total_comments)

<u>Slip-25</u>

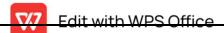
-25
Q.1) Write a script to create "cricket.xml" file with multiple elements as shown below:\\
<CricketTeam>
<Teamcountry="Australia">
<player>____</player>
<runs>____</runs>
<wicket>____</wicket>
</Team>
</CricketTeam>
Writeascripttoaddmultipleelementsin"cricket.xml"fileofcategory,country="India".
Ans:
<?php
//CreateanewDOMdocument
$doc=newDOMDocument();
//Createtherootelement
```

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```
$cricketTeam=$doc->createElement("CricketTeam");
//CreatethefirstteamelementforAustralia
$teamAustralia=$doc->createElement("Team");
$teamAustralia->setAttribute("country","Australia");
//Createtheplayerelementandsetitsvalue
$player1=$doc->createElement("player","SteveSmith");
$teamAustralia->appendChild($player1);
//Createtherunselementandsetitsvalue
$runs1=$doc->createElement("runs","7090");
$teamAustralia->appendChild($runs1);
//Createthewicketelementandsetitsvalue
$wicket1=$doc->createElement("wicket","17");
$teamAustralia->appendChild($wicket1);
//Appendtheteamelementtotherootelement $cricketTeam->appendChild($teamAustralia);
//CreatethesecondteamelementforIndia
$teamIndia=$doc->createElement("Team"); $teamIndia->setAttribute("country", "India");
//Createtheplayerelementandsetitsvalue
$player2=$doc->createElement("player","ViratKohli");
$teamIndia->appendChild($player2);
//Createtherunselementandsetitsvalue
$runs2=$doc->createElement("runs","12169");
```



```
Importpandasaspd
Importnitk
From nltk. sentiment. vader import Sentiment Intensity Analyzer
#readthedataset
Df=pd.read_csv('covid_2021_1.csv')
#removenullvaluesandduplicates
Df.dropna(inplace=True)
Df.drop_duplicates(subset='Comment',inplace=True)
#tokenizecommentsinwords
Nltk.download('punkt')
Df['tokens']=df['Comment'].apply(nltk.word_tokenize)
#performsentimentanalysis
Nltk.download('vader_lexicon')
Sia=SentimentIntensityAnalyzer()
Df['sentiment']=df['Comment'].apply(lambdax:sia.polarity_scores(x)['compound'])
#calculatepercentageofpositive,negative,andneutralcomments
Total_comments=len(df)
Positive_comments=len(df[df['sentiment']>0])
Negative_comments=len(df[df['sentiment']<0])
Neutral_comments=len(df[df['sentiment']==0])
Positive_percentage=(positive_comments/total_comments)*100
Negative_percentage=(negative_comments/total_comments)*100
Neutral_percentage=(neutral_comments/total_comments)*100
```



```
#printtheresults
Print('TotalComments:',total_comments)
Print('PositiveComments:',positive_comments,'(',positive_percentage,'%)')
Print('NegativeComments:',negative_comments,'(',negative_percentage,'%)')
Print('NeutralComments:',neutral_comments,'(',neutral_percentage,'%)')
```

Slip-26

-26

Ajaxfile

Q.1)CreateemployeetableasfollowsEMP(eno,ename,designation,salary).WriteAjax programto Selecttheemployeesnameandprinttheselectedemployee'sdetails.

```
Ans:

Htmlfile

<selectid="employee-list">

<optionvalue="">Selectanemployee</option>

<!—PopulatethisdropdownwithemployeenamesusingPHP®

</select>

<divid="employee-details">

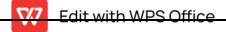
<!—Employeedetailswillbedisplayedhere®

</div>
```

```
$(document).ready(function(){
 //Addeventlistenertotheselectdropdown
 $('#employee-list').change(function(){
  VarselectedEmployee=$(this).val();
  //MakeanAJAXrequesttofetchemployeedetails
  $.ajax({ url:'empdetails.php', type:'POST',
   data:{employeeName:selectedEmployee},
   dataType:'json', success:function(response){
    //ParsetheJSONresponseanddisplayemployeedetails
    VardetailsHtml='EmployeeName:'+response.ename+'<br>'+
                   'Designation: '+response.designation+'<br>'+
               'Salary: '+response.salary;
     $('#employee-details').html(detailsHtml);
   },
   Error:function(xhr,status,error){ Console.log('Error:',error);
   }
  });
 });
});
Phpfileasempdetails.php
<?php
//Establishdatabaseconnection
$conn=pg_connect("host=localhostdbname=database_nameuser=username password=password");
If(!$conn){
 Die('Connectionfailed:'.pg_last_error());
}
```

```
//GettheselectedemployeenamefromAJAXrequest
$employeeName=$_POST['employeeName'];
//QuerytheEMPtableforthedetailsoftheselectedemployee
$sql="SELECT*FROMEMPWHEREename='$employeeName'"; $result=pg_query($conn,$sql);
If(pg_num_rows($result)>0){
 //BuildaJSONobjectwithemployeedetails
 $employee=pg_fetch_assoc($result);
 $response=array(
  'ename'=>$employee['ename'],
  'designation'=>$employee['designation'],
  'salary'=>$employee['salary']
 );
 Echojson_encode($response);
}else{
 Echo"Employeenotfound";
}
//Closedatabaseconnection
Pg_close($conn);
?>
Q.2)Considertextparagraph. """Helloall, Welcometo Python Programming Academy. Python
ProgrammingAcademyisaniceplatformtolearnnewprogrammingskills.Itisdifficulttoget enrolled
InthisAcademy."""Preprocessthetexttoremoveanyspecialcharactersanddigits.Generate the
Summaryusingextractivesummarizationprocess.Q.
Ans:
```

Importre Fromnltk.tokenizeimportsent_tokenize $From sklearn. feature_extraction. textimport Tfidf Vectorizer$ Fromsklearn.metrics.pairwiseimportcosine_similarity #Texttosummarize Text="Helloall, WelcometoPythonProgrammingAcademy.PythonProgrammingAcademyis $an iceplat form to learn new programming skills. It is difficult to get enrolled in this Academy. {\it ''}$ #Preprocessthetexttoremovespecialcharactersanddigits Preprocessed_text=re.sub(r'[^a-zA-Z\s]',",text) #Tokenizethepreprocessedtextintosentences Sentences=sent_tokenize(preprocessed_text) #CalculatetheimportancescoreofeachsentenceusingTF-IDF Vectorizer=TfidfVectorizer() Tfidf_matrix=vectorizer.fit_transform(sentences) Similarity_matrix=cosine_similarity(tfidf_matrix) #SelecttopNsentencesbasedontheirimportancescore N=2 Top_sentences=sorted(range(len(similarity_matrix[-1])),key=lambdai:similarity_matrix[-1][i])[-N:] #Concatenatethetopsentencestoformthesummary Summary=" Foriintop_sentences: Summary+=sentences[i]+"



Print(summary)

_@ Slip-27

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Q.1) Create web Application that contains Voters details and check proper validation for (name, and the contains voters details and check proper validation for (name, and the contains voters details and check proper validation for (name, and the contains voters details and check proper validation for (name, and the contains voters details and check proper validation for (name, and the contains voters details and check proper validation for (name, and the contains voters details and the contains voters d $Age, and nationality), as {\tt Nameshouldbeinupper} case letters only, {\tt Ageshould not be less than}$ 18yrsandNationalityshouldbeIndian.(useHTML-AJAX-PHP). Ans: Htmlfile <!DOCTYPEhtml> <html> <head> <title>VoterDetails</title> <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script> </head> <body> <h2>VoterDetails</h2> <formid="voterForm"> <labelfor="name">Name:</label> <inputtype="text"id="name"name="name"required>

 <labelfor="age">Age:</label> <inputtype="number"id="age"name="age"required>

 <labelfor="nationality">Nationality:</label>

<inputtype="submit"value="Submit">

```
</form>
        <divid="response"></div> <script>
               $(document).ready(function(){
                       $('#voterForm').submit(function(event){
                                 Event.preventDefault();
                               Varname=$('#name').val().toUpperCase();
                                  Varage=$('#age').val();
                                  Varnationality=$('#nationality').val();
                               $.ajax({ url:'voter.php', method:'POST',
                                       data:{name:name,age:age,nationality:nationality},
                                       success:function(response){
                                               $('#response').html(response);
                                       }
                               });
                       });
               });
        </script>
</body>
</html>
Voter.phpfile
<?php
$name=$_POST['name'];
$age=$_POST['age'];
$nationality=$_POST['nationality'];
If(preg_match('/[^A-Z]/',$name)){
```

```
Echo'Nameshouldbeinuppercaselettersonly.';
}elseif($age<18){
       Echo'Ageshouldnotbelessthan18years.';
}elseif(strcasecmp($nationality,'Indian')!=0){ Echo'NationalityshouldbeIndian.';
}else{
       Echo'Validationsuccessful.Voterdetails:<br>Name:'.$name.'<br>Age:
'.$age.'<br>Nationality:'.$nationality;
?>
Q.2)Createyourowntransactionsdatasetandapplytheaboveprocessonyourdataset Ans:
Importrandom
Importcsv
#Generaterandomtransactiondata
Transactions=[]
Foriinrange(1,101):
  Transaction_id=i
  Transaction_date=f"2022-05-{random.randint(1,31):02d}"
  Customer_id=random.randint(1,10)
  Item_id=random.choice(["A","B","C"])
  Item_price=round(random.uniform(10.0,100.0),2)
  Quantity=random.randint(1,10)
  Transactions.append([transaction_id,transaction_date,customer_id,item_id,item_price, quantity])
#SavethedatatoaCSVfile
Withopen('transactions.csv','w',newline="')ascsvfile:
  Writer=csv.writer(csvfile)
```

Writer.writerow(["TransactionID","TransactionDate","CustomerID","ItemID","ItemPrice", "Quantity"]) Fortransactionintransactions: Writer.writerow(transaction) Importpandasaspd #ReadtheCSVfileintoaPandasDataFrame Df=pd.read_csv('transactions.csv') #Convertthe"ItemPrice"columntonumerictype Df['ItemPrice']=pd.to_numeric(df['ItemPrice']) #Calculatethesalesamountforeachtransaction Df['Sales']=df['ItemPrice']*df['Quantity'] # Group the transactions by customer ID and calculate the total sales for each customer and the following properties of the properties of the contractions of the properties of the propertiesTotal_sales=df.groupby('CustomerID')['Sales'].sum().reset_index() #Printtheresults Print(total_sales) <u>Slip-28</u> -28 Q.1)WriteaPHPscriptusingAJAXconcept,tocheckusernameandpasswordarevalidor Invalid(use Databasetostoreusernameandpassword). Ans: Htmlfile

```
<!DOCTYPEhtml>
<html>
<head>
       <title>Login</title>
       <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script>
               $(document).ready(function(){
                       $("#login-form").submit(function(event){
                              Event.preventDefault();
                                 Varusername=$("#username").val();
                                 Varpassword=$("#password").val();
                              $.ajax({ url:'check_login.php', type:'post',
                                      data:{username:username,password:password},
                                      success:function(response){ if(response=="valid"){
                                      window.location.href="dashboard.php";
//redirecttodashboard
                                              }
                                               Else{
                                                           Alert("Invalidusernameorpassword");
                                              }
                                      }
                              });
                       });
               });
       </script>
</head> <body>
       <h2>Login</h2>
       <formid="login-form"method="post">
               <label>Username:</label>
```

```
<inputtype="text"name="username"id="username"><br><br>
              <label>Password:</label>
              <inputtype="password"name="password"id="password"><br><br>
              <inputtype="submit"value="Login">
       </form>
</body>
</html>
Phpfileascheck_login.php
<?php
//Establishdatabaseconnection
$conn=mysqli_connect('localhost', 'username', 'password', 'database_name');
If(!$conn){
 Die('Connectionfailed:'.mysqli_connect_error());
}
//GetusernameandpasswordfromAJAXrequest
$username=$_POST['username'];
$password=$_POST['password'];
//Querytheuserstablefortheenteredusernameandpassword
$sql="SELECT*FROMusersWHEREusername='$username'ANDpassword='$password'";
$result=mysqli_query($conn,$sql);
If(mysqli_num_rows($result)>0){
 Echo"valid";
```

```
}else{
 Echo"invalid";
}
//Closedatabaseconnection
Mysqli_close($conn);
?>
Q. 2) Build a simple linear regression model for Car Dataset.\\
Ans:
From sklearn. linear\_model import Linear Regression
Mileage=[[10],[20],[30],[40],[50],[60],[70],[80]] Price=[24,19,17,13,10,7,5,2]
Reg=LinearRegression().fit(mileage,price)
Print('Intercept:',reg.intercept_)
Print('Coefficient:',reg.coef_[0])
New_mileage=[[25],[45],[65]]
Predicted_price=reg.predict(new_mileage)
Print('Predictedprices:',predicted_price)
```



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```
Q.1) Write a PHP script for the following: Design a form to accept a number from the user.\\
Performtheoperations and show the results.
1)FibonacciSeries.
2) To find sum of the digits of that number.
(Usetheconceptofselfprocessingpage.)
Ans:
<!DOCTYPEhtml>
<html>
<head>
       <title>NumberOperations</title>
</head> <body>
       <h1>NumberOperations</h1>
       <?php
       //definevariablesandsettoemptyvalues $num=$op="";
       If($_SERVER["REQUEST_METHOD"]=="POST"){
               $num=test_input($_POST["num"]);
               $op=test_input($_POST["op"]);
               //performoperationbasedonuser'schoice
               Switch($op){
                       Case"fib":
                              $result=fibonacci($num);
                              Echo"TheFibonacciseriesof$numnumbersis:$result"; Break;
                       Case"sum":
                                 $result=sumOfDigits($num);
```

```
Echo"Thesumofdigitsin$numis:$result"; Break;
               Default:
                            Echo"Invalidoperationselected";
       }
}
Functiontest_input($data){
       $data=trim($data);
       $data=stripslashes($data);
       $data=htmlspecialchars($data);
       Return$data;
}
Functionfibonacci($num){
       $first=0;
       $second=1; $result="";
       For($i=0;$i<$num;$i++){
               $result.=$first."";
               $third=$first+$second;
               $first=$second;
               $second=$third;
       }
       Return$result;
}
FunctionsumOfDigits($num){
```

```
$sum=0;
              While($num>0){
                        $digit=$num%10;
                     $sum+=$digit;
                        $num=(int)($num/10);
              }
              Return$sum;
       }
       ?>
       <formmethod="post"action="<?phpecho htmlspecialchars($_SERVER["PHP_SELF"]);?>">
              <labelfor="num">Enteranumber:</label>
              <inputtype="number"name="num"id="num"required>
              <br><br>>
              <labelfor="op">Selectanoperation:</label>
              <selectname="op"id="op"required>
                      <optionvalue="">--Select--</option>
                     <optionvalue="fib">FibonacciSeries</option>
                      <optionvalue="sum">SumofDigits</option>
              </select>
              <br><br>>
              <inputtype="submit"value="Submit">
       </form>
</body>
</html>
```

Q. 2) Build a logistic regression model for Student Score Dataset.

Ans:

#Importnecessarylibraries

Importpandasaspd

Fromsklearn.linear_modelimportLogisticRegression

Fromsklearn.model_selectionimporttrain_test_split

Fromsklearn.metricsimportaccuracy_score

#Loadthedataset

Data=pd.read_csv('student_scores.csv')

#Splitthedataintoinputandoutputvariables

X=data.iloc[:,:-1].values

Y=data.iloc[:,-1].values

#Splitthedataintotrainingandtestingsets

X_train,X_test,y_train,y_test=train_test_split(X,y,test_size=0.2,random_state=0)

 ${\tt \#Create} the logistic regression model and fit it to the training data$

Classifier=LogisticRegression() Classifier.fit(X_train,y_train)

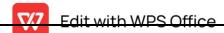
#Makepredictionsonthetestingset Y_pred=classifier.predict(X_test)

#Evaluatethemodel'saccuracy

Accuracy=accuracy_score(y_test,y_pred)

Print("Accuracy:",accuracy)

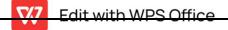
Slip-30



```
Q.1) Create a XML file which gives details of books available in "Bookstore" from following \ Categories.
1)Yoga
2)Story
3)Technical
And elements in each category are in the following format\\
<Book>
<Book_Title>
-----</Book_Title>
<Book_Author>-----</Book_Author>
<Book_Price>
-----</Book_Price>
</Book>
Savethefileas "Bookcategory.xml"
Ans:
<?xmlve<?xmlversion="1.0"encoding="UTF-8"?>
<Bookstore>
 <Yoga>
  <Book>
   <Book_Title>LightonYoga</Book_Title>
   <Book_Author>B.K.S.Iyengar</Book_Author>
   <Book_Price>20.99</Book_Price>
  </Book>
```

```
<Book>
  <Book_Title>TheYogaBible</Book_Title>
  <Book_Author>ChristinaBrown</Book_Author>
  <Book_Price>15.50</Book_Price>
</Book>
</Yoga>
<Story>
 <Book>
  <Book_Title>TheAlchemist</Book_Title>
  <Book_Author>PauloCoelho</Book_Author>
  <Book_Price>12.99</Book_Price>
 </Book>
 <Book>
  <Book_Title>TheDaVinciCode</Book_Title>
  <Book_Author>DanBrown</Book_Author>
  <Book_Price>14.75</Book_Price>
 </Book>
</Story>
<Technical>
 <Book>
  <Book_Title>PythonforDataScienceHandbook</Book_Title>
  <Book_Author>JakeVanderPlas</Book_Author>
  <Book_Price>28.99</Book_Price>
 </Book>
 <Book>
  <Book_Title>CrackingtheCodingInterview</Book_Title>
  <Book_Author>GayleLaakmannMcDowell</Book_Author> <Book_Price>23.50</Book_Price>
 </Book>
```

```
</Technical>
</Bookstore>
Q.2)Createthedataset.transactions=[['eggs','milk','bread'],['eggs','apple'],['milk','bread'], ['apple',
'milk'],['milk','apple','bread']].
Convertthecategorical values into numeric format. Apply the apriorial gorithmonthe above dataset to
Generate the frequent items et sand association rules.\\
Ans:
Transactions=[['eggs', 'milk', 'bread'], ['eggs', 'apple'], ['milk', 'bread'], ['apple', 'milk'], ['milk', 'apple', 'bread']]
#Createadictionarytomapitemstouniquenumericvalues Item_to_num={'eggs':1,'milk':2,'bread':3,'apple':4}
#Convertthecategorical values in the dataset to numeric values
Numeric_transactions=[]
Fortransactionintransactions:
  Numeric_transaction=[item_to_num[item]foritemintransaction]
  Numeric_transactions.append(numeric_transaction)
Print(numeric_transactions) Frommlxtend.frequent_patternsimportapriori,association_rules
#Generatefrequentitemsetswithaminimumsupportof0.4
Frequent_itemsets=apriori(numeric_transactions,min_support=0.4,use_colnames=True)
#Generateassociationruleswithaminimumconfidenceof0.7
```



Rules=association_rules(frequent_itemsets,metric="confidence",min_threshold=0.7)
Print(frequent_itemsets)
Print(rules)
Edit with WPS Office