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.Buildalinearregressionmodelbyidentifying independentand Targetvariable.Splitthevariablesintotrainingandtestingsets.Thendividethetrainingand testingsets Intoa7:3ratio,respectivelyandprintthem.Buildasimplelinearregressionmodel.

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)

#Printthecoefficientsandintercept
Print(“Coefficients:”,regressor.coef_)
Print(“Intercept:”,regressor.intercept_)
```

@Slip-2

Q.1WriteaPHPscripttochangethepreferencesofyourwebpagelikefontstyle,fontsize,font color, Backgroundcolorusingcookie.Displayselectedsettingonnextwebpageandactual implementation (withnewsettings)onthirdpage(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</option>
                        <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>
        <p>Thisisthepagewiththenewsettings.Thefontstyleis<?phpecho$fontstyle?>,the
fontsizeis<?phpecho$fontsize?>px,thefontcoloris<?phpecho$fontcolor?>,andthe
backgroundcoloris<?phpecho$bgcolor?>.</p>
```

```
</body>

</html>
```

Q.2)Create‘Salary’Dataset.Buildalinearregressionmodelbyidentifyingindependentand target Ariable.Splitthevariablesintotrainingandtestingsetsandprintthem.Buildasimplelinear regression Delforpredictingpurchases.

Ans:

```
Importnumpyasnp
Importpandasaspd
Fromsklearn.model_selectionimporttrain_test_split
Fromsklearn.linear_modelimportLinearRegression

#CreatetheSalarydataset
Data={‘YearsExperience’:[1,2,3,4,5,6,7,8,9,10],
                        ‘Salary’:[50000,60000,70000,80000,90000,100000,110000,120000,130000,140000]}
Df=pd.DataFrame(data)

#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($_SESSION[‘attempts’]<=0){
    Echo“Maximumloginattemptsexceeded.Pleasetryagainlater.”;
  }else{
    //Displayerrormessage
    Echo“Invalidusernameorpassword.Youhave“.$_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’Datasethaving5columnsnamely:UserID,Gender,Age,EstimatedSalaryand urchased.Buildalogisticregressionmodelthatcanpredictwhetheronthegivenparametera personwillbuyacarornot.

Ans:

```
Importpandasaspd

Data={‘UserID’:[1,2,3,4,5,6,7,8,9,10],
                        ‘Gender’:[‘Male’,‘Male’,‘Female’,‘Female’,‘Male’,‘Male’,‘Female’,‘Female’,‘Male’,‘Female’],
        ‘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)
Fromsklearn.linear_modelimportLogisticRegression

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)
Print(predictions)
```

@Slip-4

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>
        <p><strong>EmployeeNo:</strong><?phpecho$_SESSION[‘eno’];?></p>
        <p><strong>EmployeeName:</strong><?phpecho$_SESSION['ename'];?></p>
        <p><strong>Address:</strong><?phpecho$_SESSION['address'];?></p>
        <p><strong>Basic:</strong><?phpecho$_SESSION['basic'];?></p>
        <p><strong>DA:</strong><?phpecho$_SESSION['da'];?></p>
        <p><strong>HRA:</strong><?phpecho$_SESSION['hra'];?></p>
        <p><strong>TotalEarnings:</strong><?phpecho$total;?></p>
</body>
</html>
```

Q.2)BuildasimplelinearregressionmodelforFishSpeciesWeightPrediction.

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 of5 ItemsofdifferentTypes.

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)Usetheirisdataset.WriteaPythonprogramtoviewsomebasicstatisticaldetailslike percentile,

Mean,stdetc.Ofthespeciesof‘Iris-setosa’,‘Iris-versicolor’and‘Iris-virginica’.Applylogistic regression

Onthedatasettoidentifydifferentspecies(setosa,versicolor,verginica)ofIrisflowersgiven just4

Features:sepalandpetallengthsandwidths..Findtheaccuracyofthemodel.

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)
```

@ 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”?>

<bookisbn=”978-3-16-148410-0”publisher=”ExamplePublisher”>
```

```
  <title>ExampleBook</title>
  <author>JohnDoe</author>
  <description>Thisisanexamplebook.</description>
</book>
```

Q.2)Createthefollowingdatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply

Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsandassociation rules.Repeat

Teprocesswithdifferentmin_supvalues.

TID={1:[“bread”,”milk”],2=[“bread”,”diaper”,”beer”,”eggs”],3=[“milk”,”diaper”,”beer”,”coke”],4=[“bread”,”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”,”milk”,”diaper”,”beer”],5:[“bread”,”milk”,”diaper”,”coke”]}
Transactions=[]
Forkey,valueinTID.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)WriteaPHPscripttoread“Movie.xml”fileandprintallMovieTitleandActorNameoffile using

OMDocumentParser.“Movie.xml”fileshouldcontainfollowinginformationwithatleast5 records

Wthvalues.MvieInfoMovieNo,MovieTitle,ActorName,ReReleaseYear.

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)DownloadtheMarketbasketdataset.Writeapythonprogramtoreadthedatasetand displayits Information.Preprocessthedata(dropnullvaluesetc.)Convertthecategoricalvaluesinto numeric Format.Applytheapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsand association Rules..

Ans:

```
Importpandasaspd
Frommlxtend.preprocessingimportTransactionEncoder
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)
```

@ Slip-8

-8

Q.1)WriteaJavaScripttodisplaymessage'Examsarenear,haveyoustartedpreparingfor?' (usealert

Box)andAcceptanytwonumbersfromuseranddisplayadditionoftwonumber.(UsePrompt and Confirmbox)

AAAns:

```
//Displaymessageusingalertbox

Alert('Examsarenear,haveyoustartedpreparingfor?');


//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)Downloadthegroceriesdataset.Writeapythonprogramtoreadthedatasetanddisplayits Information.Preprocessthedata(dropnullvaluesetc.)Convertthecategoricalvaluesinto numeric

Format.Applytheapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsand 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)

#Displayinformationaboutthedataset
Print(“Datasetinformation:”)
Print(df.info())

#Displaythefrequentitemsets
Print(“\nFrequentitemsets:”)
Print(frequent_itemsets)

#Displaytheassociationrules
Print(“\nAssociationrules:”)
Print(rules)
```

@ Slip-9

-9

Q.1)WriteaJavaScriptfunctiontovalidateusernameandpasswordforamembershipform.

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)Createyourowntransactionsdatasetandapplytheaboveprocessonyourdataset.

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’]
]

Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori,association_rules
#Convertthetransactionsintoabinarymatrix
Te=TransactionEncoder()
Te_ary=te.fit_transform(transactions)

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

#Generatefrequentitemsetswithaminimumsupportof0.3
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)
```

@ Slip-10

10

Q.1)CreateaHTMLfiletoinserttextbeforeandafteraParagraphusingjQuery.[Hint:Use before() Andafter()].

Ans:

```
<!DOCTYPEhtml>

<html>

<head>

    <title>InserttextbeforeandafterparagraphusingjQuery</title>

    <scriptsrc=https://code.jquery.com/jquery-3.6.0.min.js></script>

</head> <body>

    <h1>InserttextbeforeandafterparagraphusingjQuery</h1>


    <p>Thisisaparagraph.</p>


    <script>

        $(document).ready(function(){

              $(“p”).before(“Textinsertedbeforetheparagraph.“);
```

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

Q2).Createthefollowingdatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply

Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsandassociation rules.Repeat

Theprocesswithdifferentmin_supvalues.

TID={1:[“eggs”,”milk”,”bread”],2=[“eggs”,”apple”],3=[“milk”,”bread”],4=[“apple”,”milk”],5=[“milk”,”apple”,”bread”]}

Ans:

```
Importpandasaspd
Frommlxtend.preprocessingimportTransactionEncoder
Frommlxtend.frequent_patternsimportapriori,association_rules

#Createthedataset
Dataset={
  1:[“eggs”,”milk”,”bread”],
  2:[“eggs”,”apple”],
  3:[“milk”,”bread”],
  4:[“apple”,”milk”],
  5:[“milk”,”apple”,”bread”]
}

#Convertcategoricalvaluesintonumericformat
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)
```

@ Slip-11

-11

Q.1)WriteaJavascriptprogramtoacceptnameofstudent,changefontcolortored,fontsize to18if Studentnameispresentotherwiseonclickingonemptytextboxdisplayimagewhichchanges itssize (Useonblur,onload,onmousehover,onmouseclick,onmouseup) Ans:

```
<!DOCTYPEhtml>
<html>
<head>
        <title>JavaScriptExample</title> <style>
                #name{
                        Font-size:14px;
                        Color:black;
                }
        </style>
</head> <body>
```

```
        <inputtype=”text”id=”name”onblur=”changeStyle()”onmouseover=”changeSize()”
    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).Createtheabovedatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply

Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsand associationrules.Repeat

Theprocesswithdifferentmin_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
Frommlxtend.preprocessingimportTransactionEncoder
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_)


#GeneratingfrequentitemsetsusingApriorialgorithmwithdifferentmin_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

Whentheuserclicksonprintbutton.Contact.datfileshouldcontainsrno,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>
            <tr>
                <th>Sr.No.</th>
                <th>Name</th>
                 <th>ResidenceNumber</th>
                <th>MobileNumber</th>
                <th>Address</th>
            </tr>
        </thead> <tbody>
            <!—Contactlistwillbedisplayedhere□
        </tbody>
    </table>
</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+=“<tr>”; for(varj=0;j<columns.length;j++){

                        tableRows+=“<td>”+columns[j]+“</td>”;

                         }

                          tableRows+=“</tr>”;

                    }

                }


                  //Addthetablerowstothetablebody

                 $(“#contactTabletbody”).html(tableRows);

            },

              Error:function(jqXHR,textStatus,errorThrown){

                  Alert(“Error:“+errorThrown);
            }
        });
    });
});
```

Q.2)Create‘heights-and-weights’Dataset.Buildalinearregressionmodelbyidentifying independent Andtargetvariable.Splitthevariablesintotrainingandtestingsetsandprintthem.Buílda simplelinear Regressionmodelforpredictingpurchases.

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)

#CreateaLinearRegressionmodelandfitittothetrainingdata
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 Serverkeepssendingbackresponseswhiletheuseristyping.Iftheusernameisnotentered thenthe Messagedisplayedwillbe,“Stranger,pleasetellmeyourname!”.IfthenameisRohit,Virat, Dhoni, AshwinorHarbhajan,theserverrespondswith“Hello,master!”.Ifthenameisanythingelse, the Messagewillbe“,Idon’tknowyou!”.

Ans:

Htmlfile

```
<!DOCTYPEhtml>

<html>

<head>

        <title>AJAXProgram</title>

        <scriptsrc=https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js></script>

</head> <body>

        <labelfor=”name”>Enteryourname:</label>
```

```
    <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 Andtargetvariable.Splitthevariablesintotrainingandtestingsetsandprintthem.Builda simplelinear 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

Programtoselectateachersnameandprinttheselectedteachersdetails.

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)Createthefollowingdatasetinpython&Convertthecategoricalvaluesintonumeric format.Apply Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsandassociation rules.Repeat Theprocesswithdifferentmin_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)WriteAjaxprogramtofetchsuggestionswhenisuseristypinginatextbox.(eglikegoogle

Suggestions.Hintcreatearrayofsuggestionsandmatchingstringwillbedisplayed).

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++){

                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

Theapriorialgorithmontheabovedatasettogeneratethefrequentitemsetsandassociation rules.Repeat

Theprocesswithdifferentmin_supvalues.

No|Company|model|year

1. Tata. Nexon. 2017
2. MG. Astor. 2021
3. Kia. Seltos. 2019
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)

#Convertcategoricalvaluesintonumericformat
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


#Generatefrequentitemsetswithmin_sup=0.5

Frequent_itemsets=apriori(df,min_support=0.5,use_colnames=True)

Print(frequent_itemsets)


#Generateassociationruleswithmin_threshold=0.7

Association_rules=association_rules(frequent_itemsets,metric=”confidence”,
min_threshold=0.7) Print(association_rules)
```

@ Slip-16

16

Q.1)WriteAjaxprogramtogetbookdetailsfromXMLfilewhenuserselectabookname. CreateXML 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> <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>
        <option>ToKillaMockingbird</option>
        <option>1984</option>
        <option>PrideandPrejudice</option>
        </select>
        <divid="details"></div>
</body>
</html>
```

Q2).Consideranytextparagraph.Preprocessthetexttoremoveanyspecialcharactersand digits.

Generatethesummaryusingextractivesummarizationpprocess.

Ans:

```
Importre
Importnltk
Fromnltk.corpusimportstopwords
Fromnltk.tokenizeimportsent_tokenize,word_tokenize Fromheapqimportnlargest

#Sampletextparagraphyoucanwriteanytext

Text="Naturallanguageprocessing(NLP)isasubfieldoflinguistics,computerscience,
informationengineering,andartificialintelligenceconcernedwiththeinteractionsbetween
computersandhumanlanguages,inparticularhowtoprogramcomputerstoprocessand
analyzelargeamountsofnaturallanguagedata.Challengesinnaturallanguageprocessing
frequentlyinvolvespeechrecognition,naturallanguageunderstanding,andnaturallanguage
generation.Thehistoryofnaturallanguageprocessinggenerallystartedinthe1950s,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)
```

@ Slip-17

17

Q.1)WriteaJavaScriptProgramtoshowHelloGoodMorningmessageonloadeventusing alertbox

AnddisplaytheStudentregistrationfrom.

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)
```

@ Slip-18

-18

Q.1)WriteaJavaScriptProgramtoprintFibonaccinumbersononclickevent.

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>
    <p>Enteranumber:</p>
    <inputtype="text"id="inputNumber">
    <buttononclick="generateFibonacci()">GenerateFibonacci</button> <pid="output"></p>
</body>
</html>
```

Q.2)Consideranytextparagraph.Removethestopwords.Tokenizetheparagraphtoextract wordsand Sentences.Calculatethewordfrequencydistributionandplotthefrequencies.Plotthe wordcloudofthe Txt.

Ans:

```
#Installthelibraries
!pipinstallnltkmatplotlibwordcloud
```

```
#Importthenecessarymodules
Importnltk
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,maurisérosconvallisnibh,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]

#Calculatethewordfrequencydistributionandplotthefrequenciesusingmatplotlib
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()
```

@ Slip-19

-19

Q.1)WriteaJavaScriptProgramtovalidateusernameandpasswordononSubmitevent.

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)Downloadthemovie_review.csvdatasetfromKagglebyusingthefollowinglink

:https://www.kaggle.com/nltkdata/movie-review/version/3?select=movie_review.csvto perform

Sentimentanalysisonabovedatasetandcreateawordcloud.

Ans:

```
Importpandasaspd
FromtextblobimportTextBlob
FromwordcloudimportWordCloud,STOPWORDS
Importmatplotlib.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)createastudent.xmlfilecontainingatleast5studentinformation.

Ans:

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

```
Importnltk
Fromnltk.corpusimportstopwords Nltk.download(‘stopwords’)
```

```
#Textparagraph

Text=“Helloall,WelcometoPythonProgrammingAcademy.PythonProgrammingAcademyis
aniceplatformtolearnnewprogrammingskills.ItisdifficulttogetenrolledinthisAcademy.”


#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)AddaJavaScriptFileinCodeigniter.TheJavascriptcodeshouldcheckwhetheranumber is

Positiveornegative.

Ans:

Htmlfile

```
<!DOCTYPEhtml>

<html>

  <head>

    <title>NumberCheck</title>

    <scriptsrc=”<?phpechobase_url(‘js/numberCheck.js’);?>”></script>

  </head>
  <body>
    <h1>NumberCheck</h1>
    <p>Enteranumbertocheck:</p>
    <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)BuildasimplelinearregressionmodelforUserData.

Ans:

```
Importpandasaspd
Fromsklearn.model_selectionimporttrain_test_split
Fromsklearn.linear_modelimportLinearRegression
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()
```

@ Slip-22

-22

Q.1)Createatablestudenthavingattributes(rollno,name,class).Usingcodeigniter,connectto the

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).Consideranytextparagraph.Removethestopwords.

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)Createatablestudenthavingattributes(rollno,name,class)containingatleast5recodes. Using

Codeigniter,displayallitsrecords.

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);




//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“<table>”;
    Echo“<tr><th>RollNo</th><th>Name</th><th>Class</th></tr>”;
    While($row=pg_fetch_assoc($result)){
        Echo“<tr><td>”.$row[‘rollno’].“</td><td>”.$row[‘name’].“</td><td>”.$row[‘class’]. “</td></tr>”;
    }
    Echo“</table>”;

    //closedatabaseconnection Pg_close($conn);
}
?>
```

Q2).Consideranytextparagraph.Preprocessthetexttoremoveanyspecialcharactersand Digits.

Ans:

```
Importre

Text=“Hello,#world123!Thisisasampletextparagraph.Itcontainsspecialcharactersand5 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“<tr><th>Roll
No</th><th>Name</th><th>Address</th><th>College</th><th>Course</th></tr>”;

Foreach($filtered_studentsas$student){

    Echo“<tr>”;

    Echo“<td>{$student->rollno}</td>”; Echo“<td>{$student->name}</td>”;

    Echo“<td>{$student->address}</td>”;
    Echo“<td>{$student->college}</td>”;

    Echo“<td>{$student->course}</td>”;

    Echo“</tr>”;

}

Echo“</table>”;

?>
```

Q.2)Considerthefollowingdataset:
https://www.kaggle.com/datasets/datasnaek/youtubenew?select=INvideos.csv

WriteaPythonscriptforthefollowing: i.

Readthedatasetandperformdatacleaningoperationsonit. ii.

ii.Findthetotalviews,totallikes,totaldislikesandcommentcount.

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’tointeger

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)
```

@ Slip-25

-25

Q.1)Writeascripttocreate“cricket.xml”filewithmultipleelementsasshownbelow:

```
<CricketTeam>
<Teamcountry=”Australia”>
<player>____</player>
<runs>______</runs>
<wicket>____</wicket>
</Team>
</CricketTeam>
```

Writeascripttoaddmultipleelementsin“cricket.xml”fileofcategory,country=”India”.

Ans:

```
<?php
//CreateanewDOMdocument
$doc=newDOMDocument();

//Createtherootelement
```

```
$cricketTeam=$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”);
```

```
$teamIndia->appendChild($runs2);

//Createthewicketelementandsetitsvalue
$wicket2=$doc->createElement(“wicket”,“4”); $teamIndia->appendChild($wicket2);

//Createthecategoryelementandsetitsvalue
$category=$doc->createElement(“category”,“Captain”); $teamIndia->appendChild($category);

//Appendtheteamelementtotherootelement $cricketTeam->appendChild($teamIndia);

//Appendtherootelementtothedocument $doc->appendChild($cricketTeam);

//SavetheXMLfile
$doc->save(“cricket.xml”);

Echo“Elementsaddedsuccessfully!”;
?>
```

Q.2)Considerthefollowingdataset:https://www.kaggle.com/datasets/seungguini/youtubecommentsfor-covid19-relatedvideos?select=covid_2021_1.csv WriteaPythonscriptforthefollowing: i.

Readthedatasetandperformdatacleaningoperationsonit. ii.

ii.Tokenizethecommentsinwords.Iii.Performsentimentanalysisandfindthepercentageof

positive,negativeandneutralcomments..

Ans:

```
Importpandasaspd
Importnltk
Fromnltk.sentiment.vaderimportSentimentIntensityAnalyzer

#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

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>
```

Ajaxfile

```
$(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,WelcometoPythonProgrammingAcademy.Python ProgrammingAcademyisaniceplatformtolearnnewprogrammingskills.Itisdifficulttoget enrolled InthisAcademy.”””Preprocessthetexttoremoveanyspecialcharactersanddigits.Generate the Summaryusingextractivesummarizationprocess.Q.

Ans:

```
Importre

Fromnltk.tokenizeimportsent_tokenize

Fromsklearn.feature_extraction.textimportTfidfVectorizer

Fromsklearn.metrics.pairwiseimportcosine_similarity


#Texttosummarize

Text=“Helloall,WelcometoPythonProgrammingAcademy.PythonProgrammingAcademyis
aniceplatformtolearnnewprogrammingskills.ItisdifficulttogetenrolledinthisAcademy.”


#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

-27

Q.1)CreatewebApplicationthatcontainsVotersdetailsandcheckpropervalidationfor(name, Age,andnationality),asNameshouldbeinuppercaselettersonly,Ageshouldnotbelessthan 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><br><br>
                <labelfor="age">Age:</label>
                <inputtype="number"id="age"name="age"required><br><br>
                <labelfor="nationality">Nationality:</label>
                <inputtype="text"id="nationality"name="nationality"required><br><br>
                <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’]

#GroupthetransactionsbycustomerIDandcalculatethetotalsalesforeachcustomer

Total_sales=df.groupby(‘CustomerID’)[‘Sales’].sum().reset_index()


#Printtheresults Print(total_sales)
```

@ Slip-28

-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> <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)BuildasimplelinearregressionmodelforCarDataset.

Ans:

```
Fromsklearn.linear_modelimportLinearRegression

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)
```

@ Slip-29

-29

Q.1)WriteaPHPscriptforthefollowing:Designaformtoacceptanumberfromtheuser.

Performtheoperationsandshowtheresults.

1)FibonacciSeries.

2)Tofindsumofthedigitsofthatnumber.

(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“<p>TheFibonacciseriesof$numnumbersis:$result</p>”; Break;
                        Case“sum”:
                                   $result=sumOfDigits($num);
```

```
            Echo“<p>Thesumofdigitsin$numis:$result</p>”; Break;
        Default:
                Echo“<p>Invalidoperationselected</p>”;
    }
}

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)BuildalogisticregressionmodelforStudentScoreDataset.

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)

#Createthelogisticregressionmodelandfitittothetrainingdata
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

-30

Q.1)CreateaXMLfilewhichgivesdetailsofbooksavailablein“Bookstore”fromfollowing Categories.

1)Yoga

2)Story

3)Technical

Andelementsineachcategoryareinthefollowingformat

<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’]].

Convertthecategoricalvaluesintonumericformat.Applytheapriorialgorithmontheabove datasetto

Generatethefrequentitemsetsandassociationrules.

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}

#Convertthecategoricalvaluesinthedatasettonumericvalues
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)
```