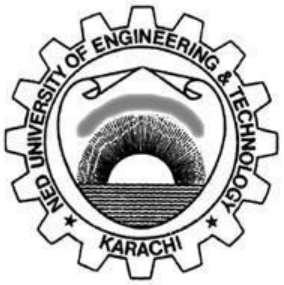

NED UNIVERSITY OF ENGINEERING AND TECHNOLOGY

SOFTWARE DEPARTMENT

COURSE

ARW (HS-115)

TITLE:

DIGITAL TAX/REVENUE COLLECTION SYSTEM(FELDGRAU)

STUDENTS:

NIMRAH ALTAF ADAM (FESE-077)

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TEACHER:

MUHAMMAD ALI KHAN

TASK

FORMAL REPORT

BATCH

SE-FE 2019

Instructions:

- 6-7 members in each group
- Word Limit: 2,000 to 2500 words
- Provide **in-text citation** where necessary in IEEE format to avoid plagiarism detection.
- Maximum **10-15% similarity index** is accepted, if it exceeds, then negative marking will be done.
- You can add/delete/modify headings according to your project.
- Each heading must be divided among members. Write your surname & roll no. after heading: “Abstract (Khan, SE-001).”
- Your work & write-up should be equally divided. This will reflect your effective group management skills.
- The name of the document must be group name and roll no (Purple_SE 001, 005, 008, 045).
- **15-August-2020 is the last date to submit the report.**

CONTENTS

1.0 Abstract

(FARIYA KHAN SE-066)

The issue of tax evasion has proven to be a difficult practice to control even in nations with appropriate databases of its citizenry and the existing mode of tax payment is terminated and chaotic as learnt through a survey of our case study. Some of the challenges governmental figures have to overcome in order to encourage the rapid payment of taxes and effectively lessen evasion includes, developing suitable payment methods and having appropriate records keeping systems.

This research work is a brief summary of how the constant development of computing science and its extensive ability to be deployed to solve a wide range of difficulties that can be geared towards the development of an automated taxation system to assist government bodies with appropriate tax collection and record keeping**[15]**. The SPIRAL methodology was selected for system development to overcome risks at early stages and work better with them for providing efficient automated taxation systems. Goals to be accomplished by the system are prompt access, enhanced productivity through well-organized utilization of resources, database formation and records supervision, simplification of operations, reduced processing time, user friendliness, portability and flexibility for further improvement This system aspects at how tax payment can be fortified through simplification and improved efficiency in payment processing.

2.0 Introduction

(FARIYA KHAN SE-066)

A tax is an obligatory financial charge or some other type of levy compulsory upon a taxpayer by a governmental organization in order to account government expenditure and various public expenses. A failure to pay, along with elusion of or struggle to taxation, is punishable by law.. Taxes from people benefit us throughout lives in social welfare as well as sustain government. Tax money helps to ensure the roads you travel on are harmless and well-maintained. The also fund public libraries and parks and taxes are also used to fund many types

of government programs that help the poor and less privileged, as well as many schools. Due to the manual process of collection of Tax and appropriate recording of records, the government fails to gather the proper Tax from the people.**[16]**

Digital technology in tax administration not only offers lower transaction costs, but also allows modernization in tax policy, better recording databases, easy access to information. A tax system will not function effectively if it enforces requirements that administration cannot meet and are not clear cut. Countries that has implemented new tax measures to tax the digital economy pursue a larger distribution of taxing rights to the source state, in which the customer market is positioned.

3.0 Objectives & Research Question

(FARIYA KHAN SE-066)

1.Prompt tax payment and reduced tax elusion is always a prime objective of the government mainly through digital techniques to access it in a constructive manner.

> **Q:** *Will the prompt taxation work smoothly without leading us to any error due to gadgets or risk assessment in the digital taxation system?*

2. Making Tax Digital (MTD) aims to make it easier for people and businesses to keep on top of their tax returns. The switch to a digital-only system should be more effective, competent and reduce errors that lead to taxpayers having to pay more.

> **Q:** *Does making the tax system digital would make our system work efficiently and would keep us on track to achieve the desired goal?*

3. Enhancing the ability of the tax system to accumulate due taxes through claim of modern techniques, providing taxpayer sustenance and by creating a motivated, devoted, professional workforce.

Q: *What reforms and practices of digitalization should be implemented in order to make a professional and effective working environment for all the common men i.e. taxpayers as well as for business departments?*

4.0 Statement of the problem /market need /research gap

(FARIYA KHAN SE-066)

1. Due to the manual process of collection of Tax and appropriate recording of records, the government fails to gather the proper Tax from the people, body, and cooperation also from business organizations that are due for Tax payment, Poor tax policy and Bad implementation.

2. The government cannot access all the locations to collect Tax from them. Also because of contradictions in the process, the actual Tax payment might not be designed efficiently from these bodies. Therefore, making the government lose so much in the revenue generation from the Tax income facility.

3. Problem is the large number of tax releases presented to certain sections of society. Increasing tax revenues has proven to be an important challenge for recent Pakistani governments.

5.0 Requirement Engineering

5.1 STAKEHOLDERS IDENTIFICATION

(BUSHRA ASIF FESE-064)

Stakeholders involved in digitized tax system are:

1. **Taxpayers:** Taxpayer is any person or corporation (we can say a company) who is obliged to pay taxes.

There are two types of taxpayers.

i) Single or individual taxpayer: A single person or any single citizen who resides in the borders of the country is considered as the individual taxpayer.

ii) Organization: Organizations, corporations, firms, or even stand alone smaller companies involved in any business are also responsible for the payment of the tax.

2. **Importers and exporters:** All the Importers/Exporters have to necessarily mention GST Registration number (GSTIN) along with Import Export Code (IEC) in the entry bills, Shipping bills and Courier forms.

3. **Tax agents:** Tax agents are the tax advisors who are responsible for filing tax returns and handle the payments on behalf of the taxpayers. They mostly have a strong interaction with the taxpayer to advise them.

4. **Software vendors:** Vendor is a person or a market that sells software so digitalization tax systems require some software for the interaction of the customer or taxpayer to the digital version of the tax system so that the revenue payers submit information in the prescribed data format.

5. **Government:** Government is responsible for funding such big scale projects. The finance ministry usually handles the budget allocation and the investment.**[20]**

5.2 REQUIREMENT GATHERING

5.2.1 BACKGROUND CASES

(BUSHRA ASIF FESE-064)

In the course of this research, considerable review of some tax systems were carried out in order to recognize basic comparisons between our proposed system and the already existing ones.

The systems under consideration are:

South African Revenue Service (SARS)

Electronic Federal Tax Payment System (EFTPS).

1) SOUTH AFRICAN REVENUE SERVICE (SARS)

Some of the objectives achieved through the development of the SARS include:
To increase the number of taxpayers by promoting awareness
Provision of a suitable means of paying taxes.
Provision of a customs service that will maximize tax collection.

2) ELECTRONIC FEDERAL TAX PAYMENT SYSTEM (EFTPS)

The Electronic Federal Tax Payment System (EFTPS) is a free system from the U.S. Department of the Treasury. All taxes can be paid by EFTPS and payments can be created by their Web site. A fast, secure, reliable, and accurate system,EFTPS is available by phone or online 24 hours a day, 7 days a week.

3) SIMILARITIES BETWEEN PROPOSED AND EXISTING SYSTEMS:

Some similarities between the reviewed systems which will be applied in the proposed system include:

A. Serving as record keeping instruments that can be used to detect the transparency and ability of revenue regulatory bodies.

B. An introduction of a system that will process commercial instruments and make tax payments easy, fast and quick for taxpayers.

C. SARS also serves as means of providing and comes up with the information on taxes which will be included in our system while the EFTPS is strictly and strongly a payment processing system.

4) DIFFERENCES BETWEEN PROPOSED AND EXISTING SYSTEMS:

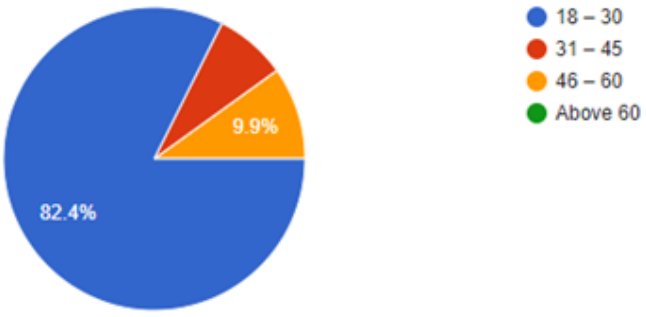
A. The EFTPS has the option of making or scheduling payments through phone calls, mails and other offline methods which are not available in other systems and will also not be included in the proposed system.
B. The SARS has tax payment calculators with varying complexity and difficulty. This tax calculator task depends on data not willingly available in the proposed system's operational environment.
C. SARS interfaces with systems of other governmental bodies in some cooperative relationship whereby they give one another needed information necessary to properly carry out their respective responsibilities.

All three systems are organized for all forms of taxation while our system will make for only the Company Income Tax and Pay as You Earn.**[1]**

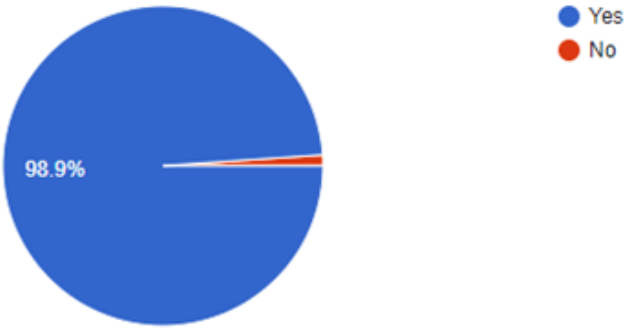
5.2.2 SURVEY

(Nimrah Altaf Adam FESE-077)

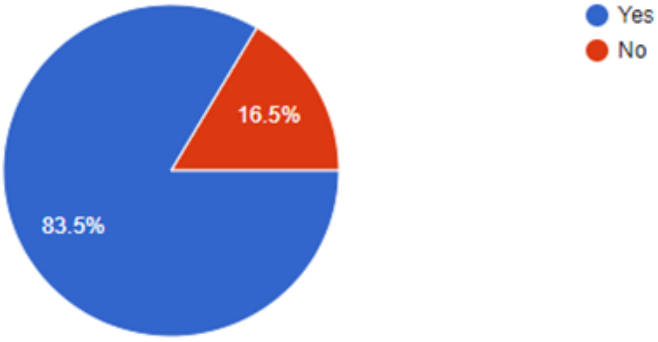
1) **Age:**



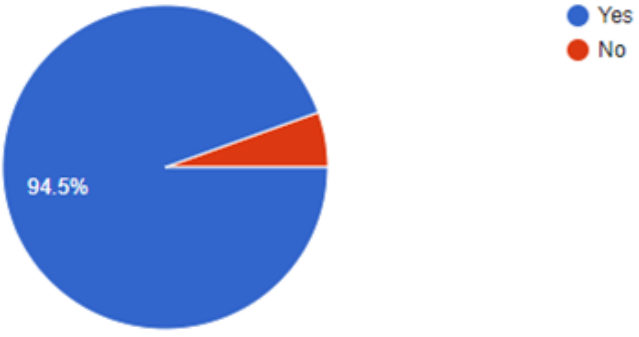
2) **Do you have access to an internet connection ?**



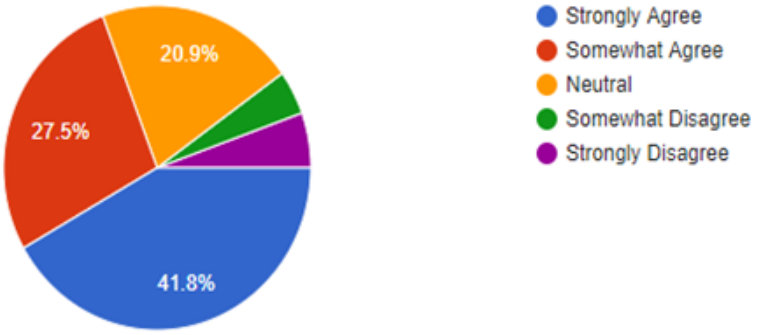
3) **Do you have a Cell Phone Number ?**



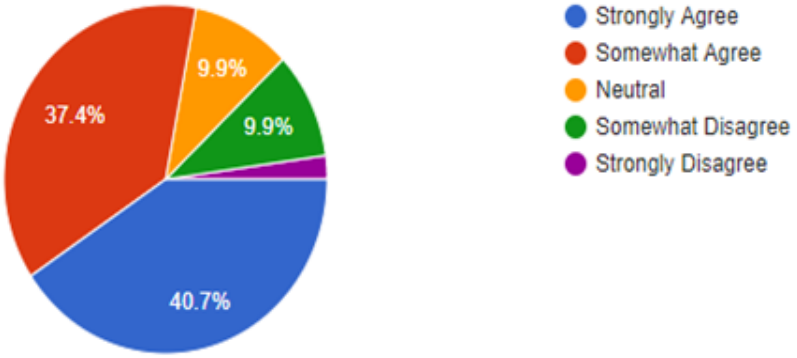
4) **Do you have any electronic gadgets available ?**



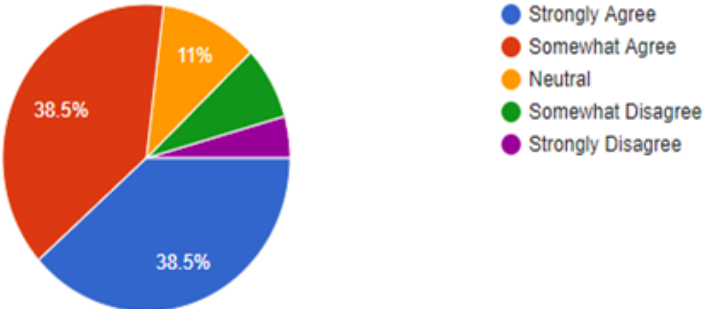
5) **Taxes are so heavy that tax evasion is an economic necessity for many to survive.**



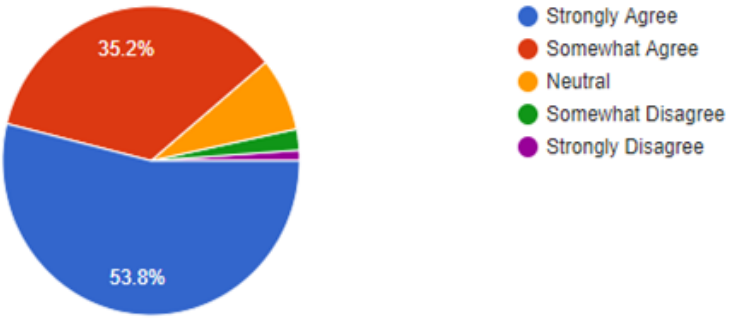
6) **Do you think people evade taxes due to lack of trust in the government?**



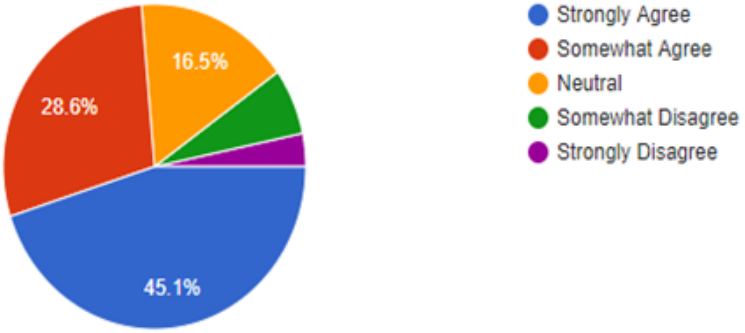
7) **The rate of tax evasion would decrease if the system is computerized.**



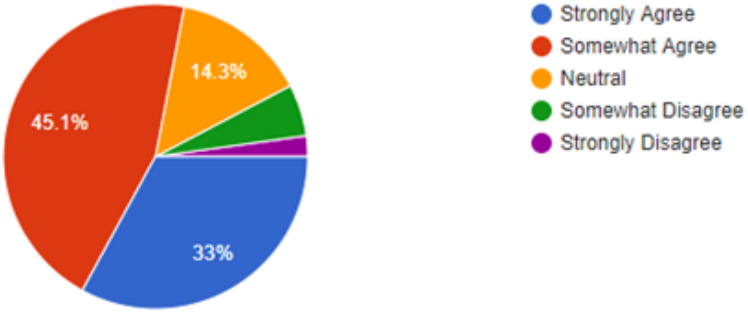
8) **The whole system of tax collection would become more efficient and accurate if it is automated.**



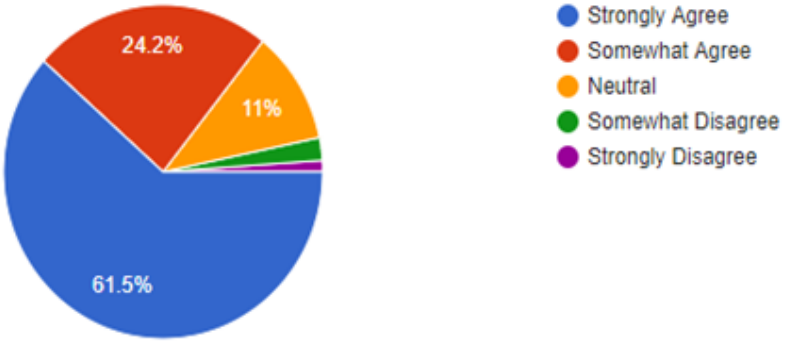
9) **Through this system the user data will be more secure.**



10) **The system will be able to prevent frauds and thefts from taking place.**



11) **Being able to pay taxes at home through online forums is more preferable than being made to pay them at designated venues.**



Most people nowadays have access to an internet connection and an electronic gadget is also available so paying taxes through online forums would not be a problem.

Most people would find the system convenient as they will be able to pay their taxes from home.

The issues of tax evasion and inefficiency of the system would resolve with the development of an electronic taxation system.

5.3 SELECTION OF LIFE CYCLE MODEL-SPIRAL MODEL

(Nimrah Altaf Adam FESE-077)

The points that formed the core upon which our development methodology was determined are:
i. A transaction oriented system.
ii. Easy to cater for new tax types or changes to existing taxes.
iii. Long and complex requirements.
iv. Risk Evaluation is important for ranking debt cases.
v. It is a high risk project as sensitive data like user account details are involved.

Based on the above listed points, the Spiral Model is our chosen Development Methodology. The Spiral model is a combination of iterative development process model and sequential linear development model i.e. the Waterfall Model.**[1][2]**

5.4 SYSTEM REQUIREMENT SPECIFICATION

(Nimrah Alatf Aadm FESE-077)

5.4.1 FUNCTIONAL REQUIREMENTS:

5.4.1.1 ACCESS CONTROL AND AUTHORIZATION

i) Create Account

Any new users should be able to create an account by providing the Requirements of e-enrollment mentioned below:

- CNIC/NICOP/Passport number
- Cell phone number in use
- Active email address
- Nationality
- Residential address
- Accounting period
- In case of business income
    - Business Name
    - Business Address
- Name and NTN of employer in case of salary income
- Address of property in case of property income

· Choose a **password** (8–20 characters) and it:

§ should be case sensitive

§ should include at least one number and three letters,

§ may contain special characters.

The user should receive a confirmation that their account has been created on the provided email address.**[3]**

ii) Login

The user should either enter a Computerized National **Identity** Card (CNIC) **number** (in case of an individual) or enter a National Tax Identification Number(in case of a company or an association of persons (AOP)) as the Registration Number and password in order to access the account.

iii) Manage Account

Users having an account should be able to:

- view their payment history and their due payments
- track their transactions
- provide feedback
- Change their Email Id or password
- In order to edit information like CNIC Number, account details etc. the users would have to make a request to the administration

through one of the methods available in the helpline section of the website.

iv) Helpline

A helpline should be created that:

- should be available for a set number of hours to help taxpayers resolve their issues on a daily basis
- a different numbers of ways should be available through which both national and international tax payers can contact them like:

  E-mail Address
  Contact Number for national citizens
  Contact Number for International citizens[3]

5.4.1.2 TAX ADMINISTRATION ACTIVITIES

i) A Taxpayer Registration system that can:

• Issue and maintain a national tax identification number for a company and an association of persons (AOP) and in case of individuals, 13 digits(CNIC) number is going to be used as NTN or registration number.

• Integrate the registration system with all other core business functions.

ii) A Payments processing system that can:

• Capture identification number, tax type, payment period, payment type, and payment amount.

• Update these details into the taxpayer and revenue accounts automatically.

iii) A Taxpayer and Revenue Accounting system that can:

• Calculate due dates for incoming transactions.

• Allow, with appropriate security, taxpayers to look at their account via web access.

• Generate a statement of account, in either paper or electronic form for a specific tax type, or consolidated for all tax types.

iv) An Arrears Management system that can:

• Detect cases where there is a debt outstanding and payable and report them so that coordinated action can be taken.

• After a further determined period, if the debt remains outstanding, allocate the case for manual follow up.

• Support collection of outstanding debts by installments.

• Generate management information like the amount written off, the age of debt, the number of taxpayers who are in debt, and an audit trail of any accesses or adjustments made.

v) An Audit Support system that can:

• Conduct financial analysis of form (declaration/return) and other data to automatically select and prioritize cases for audit based on risk management criteria.

• Record audit activities and results.

• Generate determined management information on the numbers, timeliness and results of audits, the success rate of audit cases selected, changes to selection criteria.

vi) A Taxpayer Services system that can:

• Provide staff and taxpayers with access to rulings database, public information and answers for frequently asked queries.

• Ensure information and downloadable forms on the department's website are accurately maintained.

vii) A Revenue Reporting and Forecasting system that can:

• Track revenue collection against predetermined budgets for particular tax types and for the revenue as a whole.

• Create and maintain revenue forecasting models that can determine "what if" scenario planning outcomes for tax policy budget changes.**[4]**

5.4.2 NON-FUNCTIONAL REQUIREMENTS

5.4.2.1 SECURITY:

Security is of utmost importance while developing such systems as the user's financial data is very critical and this system would need to apply some strong security measures in order to protect the user data from malicious users and prevent thefts and frauds. The security measures are:

i) User Login:

• Use two step verification at the time of registration.

• At the time of login if 3 unsuccessful attempts have been made then the user should not be allowed to enter data in the login area and will have to contact the administration in order to access their account.

ii) Administration:

Calculate and maintain a check digit and internal referencing to ensure the validity of the identification numbers entered in the login area by the users.

iii) Website:

• Install Secure Sockets Layer certificate as it is very important for the safety of a website.

• Use anti-malware software – to scan for and prevent malicious attacks.

• Keep your website up to date as using out-of-date software is like leaving your back door unlocked.**[5]**

iv) Database:

• Install a firewall, due to this every connection to the database can be set by default to deny all incoming traffic. It will also block direct client access and allow only authorized applications.

• Application Code should be implemented. This will ensure all configuration files and source codes are accessible only through authorized operating system accounts. Application code is regularly reviewed to ensure it is not vulnerable to SQL injection.

• Keep track of change management by logging all database activities. Every bit of login data will be maintained for at least one year for security audits.**[6]**

6.0 Literature Review

Author & Date	Problem	Software/ Tool	Result	Further Research
A. Onuiri Ernest E.	Nations with proper databases are also finding it difficult to	I, A Windows Vista, 7 or 8	It describes how tax payment can be encouraged through	The software can be enhanced further for example its database can be interlinked with the database of other governmental organizations

Faroun Fikayo Erhinyeme Ogheneovo Jegede Ayodeji April, 2015	control the rates of tax evasion as the current mode of tax payment is repetitive and hectic.	operating system. II. SVGA graphics	an e-tax system that provides information, education, and support to taxpayers and facilitates compliance and administration.	and keep the software up to date inorder to maintain security
B. Sabina Hodzic 2019	Difficulties in deployment of e-services especially e-taxation in Croatia along with the analysis of strengths and weaknesses of that digital system	I. Big Data II. Cloud Computing	A very safe and reliable e-tax system through which one can easily file and pay the taxes called e-porezna.	More enhancement can be made by working on quicker response to taxpayer expectations and simplifying integration needs.
C. Waseem Ahmad Khan 15 October 2014	Rate of tax evasion is high in Pakistan.A case study on regions of southern Punjab.	I.Statistical Package for the Social Sciences(SPSS) 16.0 II. Ms Office	The main causes of tax evasion in Pakistan are lack of progressive taxation , Tax system , High rates of taxes ,corrupt government and lack of awareness among the people so they just go with the flow	Awareness sessions should be conducted for the people so they don't evade taxes, Introduction of progressive taxation can eliminate inequality in taxation system , accountability of government encourages taxpayers to pay taxes.
D. Grace Oyeyemi Ogundajo, Ishola Rufus Akintoye, Ifayemi Moses Olayinka	Improper taxing of informal sector and revenue generation in Nigeria.	I.Spatial and featured database II. Global Positioning System III. Geographic Information System	A highlight on the tax evading informal sector, clarifying their situation and identifying a clear set of problems to be overcome.	focusing on the individual methods of tax frauds and the stability of a systematic tax collection hierarchy without any loose ends, or any chance of finance leakages.

E. Haroon alterwneth, Mohammad altarwneth, Farhan alobisat 10th August 2015	Large weakness in the use of manual taxation systems, which makes the country lose a lot of financial resources and decreases the tax revenue and increases the ways of tax evasion.	I. Cloud computing, II.Xero(sale tax and tax filing tool), ebooks	Computer information or digitalized systems are then used in the income tax department to provide relevant and accurate information and avoid loss of financial resources.	Availability of necessary software to taxpayers and tax administration can allow to improve the performance of the tax and calculate data and prepare their return and settle their taxes.
F. Metin Allahverdi Metehan Ortakarpuz September 2017	Taxpayers face difficulties during tax submission as the process is too long and most of the time the tax collectors are not found on their seats.	I.SQL for database II.CSS,html for styling III.c# for windows application	E-taxation has brought about a massive change in tax administration and as a result transparency exists throughout the system.	The software should be updated following any changes in the tax policy imposed by the government.
G. Noel Varela, Laura Patricia Carrasquilla Díaz Omar Bonerge Pineda Lezama August 2020	Officers demand bribes for tax payers in exchange for reducing their tax payment to half .	I. Ruby II. Swift	E-taxation helps us to pay our taxes easily from homes.Tax payers are also satisfied with the system as databases are quite secure.	This report shows that a significant amount of tax payers do not declare VAT reported by their clients.

6.1 Summaries

A. Design And Development Of An E-Taxation System

(Nimrah Altaf Aadm FESE-077)

A tax is a mandatory financial charge imposed on a tax payer (person or an institution) by the government in order to fund various public expenditures. However, as the current mode of tax payment is repetitive and hectic the rate of tax evasion is quite high. This paper is an abridged synopsis of how the constant progress made in the field of computer sciences can prove to be useful for developing electronic taxation systems that would serve governmental bodies with convenient record keeping, increased efficiency in payment processing, reduced processing time and much more. The waterfall methodology was selected for system development.**[1]**

B. Tax Administrative Challenges Of The Digital Economy: The Croatian Experience

(Ali Zia Khan FESE-052)

The world is turning into a Global Village and surely digitalization is one of the most important factor.This paper depicts what problems and challenges are being faced by Croatia while transforming its economy towards digitalization, specially the tax administration in order to meet the high EU standards of e-governance.It also tells that current e-system of Croatia , e-Porezna have its own strengths and weaknesses due to the factors like less developed ICT sector in the country and also suggests the remedies for more betterment of the service along with critical assessment by using SWOT Model, so it would be helpful for maximizing the revenue**.[17]**

C. Causes Of Tax Evasion In Pakistan

(Syeda Khadeeja Naqvi Fese-074)

This paper elaborates the main causes of tax evasion in Pakistan which are ineffective taxation system, lack of progressive taxation, high rates of taxes, corrupt government and ignorance related to taxation among the people. This paper analyzes all possible ways and means to eliminate tax evasion. Tax evasion results in collecting less tax revenue and the downfall of the economy. Introduction of progressive taxation can eliminate inequality in the tax system. Accountability of government can eliminate its corruption. Tax system should be understandable and

easy. Tax rates should be according to the law. Awareness programs should be started with different channels. By following the above suggestions, the government can reduce tax evasion and can increase their revenue.[13]

D.Taxing Informal Sector And Revenue Generation In Nigeria

(Muhammad Sameed Abbasi FESE-059)

The Nigerian government wants to include the informal sector in the tax net as a major percentage of their population is affiliated with this sector. The main issues which were found were that many did not have either proper knowledge of tax or the intention of paying tax or proper documentation to follow the current taxation procedure. The negligence of the government and corrupt hierarchy of tax collectors and administrators cause major revenue leakages. All these problems were researched in depth to find an appropriate solution with immediate effects**.[8]**

E. The Effect Of E-Taxation System On Tax Revenues And Costs:Turkey Case

(Fasih-Ur-Rehman Ansari FESE-090)

This paper aims to research the consequences of the electronic tax system on tax collections and the cost of tax collection.In this analysis, it was chosen as variables the impact of tax revenues on Gross Domestic Product (GDP), budget revenues, and the influence of the amount of expenditures provided for tax revenue collected.

The survey also provided information more about tax structure 's electronic transformation.The transformation to an electronic tax system now has a significant positive effect on financial revenues and a decrease in tax costs.**[11]**

F.Design And Implementation Of A System To Determine Tax Evasion Through De Stochastic Techniques

(Fariya Khan FESE-066)

Taxpayers should be encouraged to build tactics for tax avoidance that would increase their financial gains.This paper sets out a framework focused on parametric

models, with the goal of developing a model for detecting possible tax evaders of value added tax (VAT) in Colombia.

According to the International Standard Industrial Classification (ISIC) coding this approach considers multinational corporations of taxpayers distinguished by economic activity.A tiny percentage were chosen to analyze the VAT returns on their receipts against the VAT returns on their manufacturers 'and purchasers' receipts.The whole process shows a small number of taxpayers do not disclose their clients registered VAT, while a substantial group of taxpayers slowly collect tax credit, thus raising their VAT returns.**[12]**

G.The Impact Of The Computer Information System In The Reduction Of The Tax Evasion:

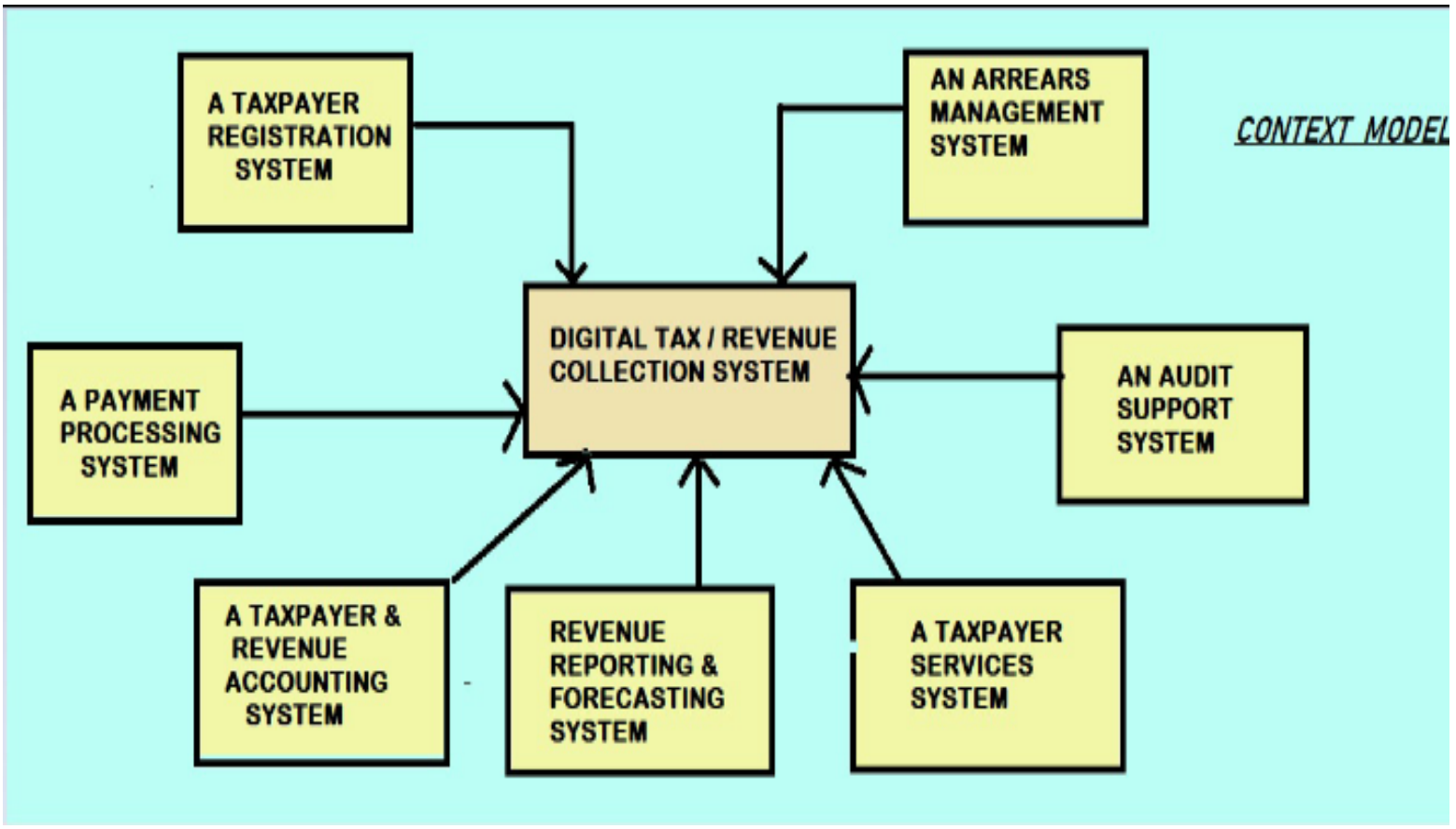
(Bushra Asif FESE-064)

The paper examines how the computerized system reduces evasion. The digital systems in every aspect of life play an important role to promote and provide solutions for a lot of obstacles and hurdles that are faced or going to face in the information field. The arrival of the role and the possibility of a computer information system used in the tax in reducing tax evasion through the accessibility and availability of the necessary attributes and features in this system. with the huge and massive development, technology and scientific progress surely increased the importance of the development of digital systems that help in evasion reduction.**[19]**

7.0 Software Design/Architecture

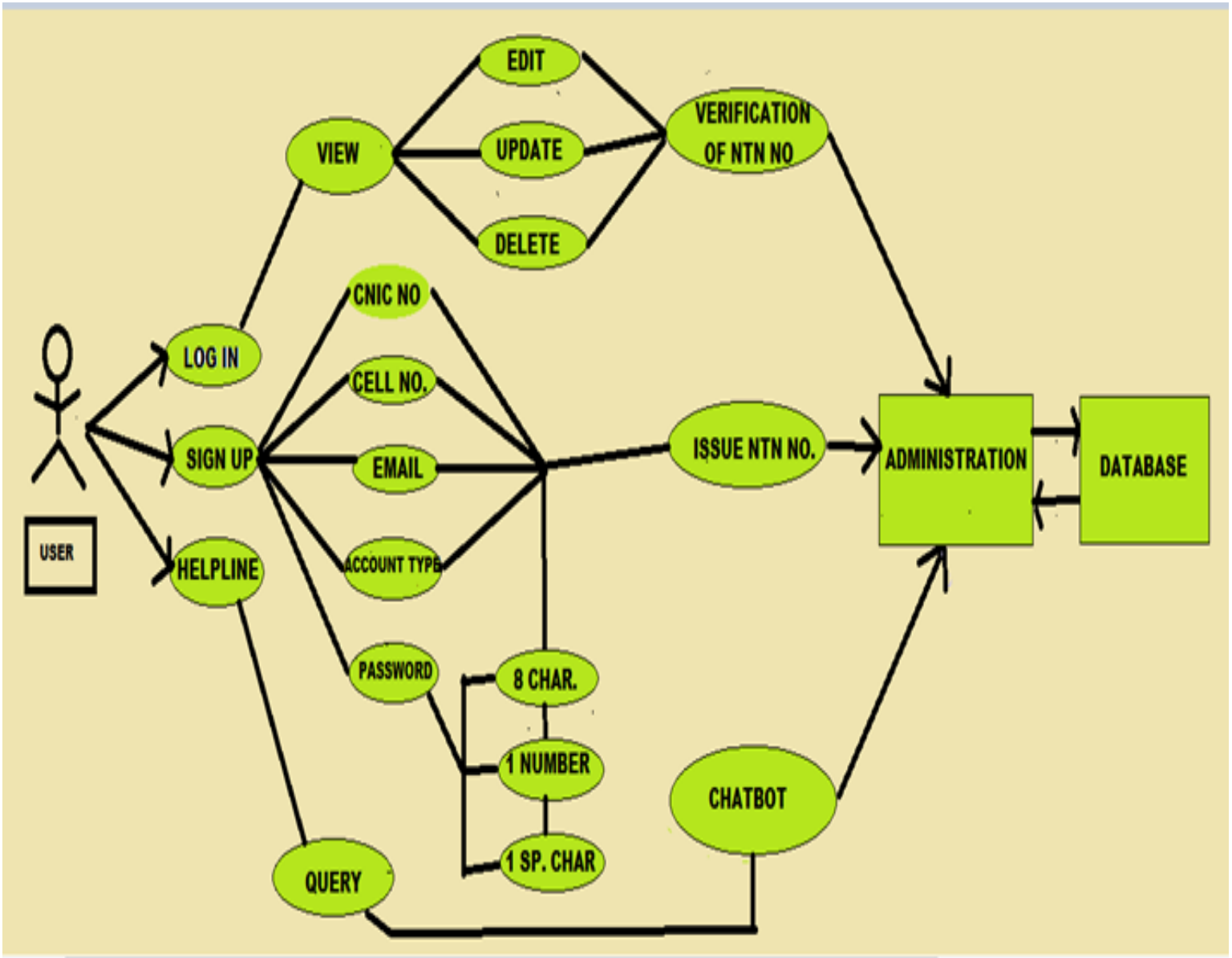
7.1 CONTEXT MODEL OF DIGITAL TAX / REVENUE COLLECTION SYSTEM:

(Ali Zia Khan FESE-052):


A TAXPAYER REGISTRATION SYSTEM
AN ARREARS MANAGEMENT SYSTEM
CONTEXT MODEL
DIGITAL TAX / REVENUE COLLECTION SYSTEM
A PAYMENT PROCESSING SYSTEM
AN AUDIT SUPPORT SYSTEM
A TAXPAYER & REVENUE ACCOUNTING SYSTEM
REVENUE REPORTING & FORECASTING SYSTEM
A TAXPAYER SERVICES SYSTEM

7.2 USE -CASE DIAGRAM FOR E-TAXATION SYSTEM:

(*ALI ZIA KHAN FESE-052*)



7.3 RISK IDENTIFICATION/ MANAGEMENT:

(ALI ZIA KHAN FESE-052)

RISK	PROBABILITY(P) 1=Low 5=High	SEVERITY(S) 1=Low 5=High	RISK SCORE =P*S 1=Low 25=High	MITIGATION
DATA IS LOST DURING OPERATIONS	1.5	4	6	DATA SHOULD BE REGULARLY BACKED UP IN DATABASE
USER FACES DIFFICULTY WHILE INTERACTING WITH THE INTERFACE	3.5	2	7	A CHATBOT, CALL CENTRE OR OTHER GUIDELINES SHOULD BE GIVEN BEFORE USE
IF ANYONE TRIES TO BREACH THE SECURITY LEVEL	4.5	5	23.5	AN ALERT SYSTEM SHOULD INFORM THE AUTHORITY IMMEDIATELY

IF ANY VIRUS OR MALWARE ENTERS IN THE SYSTEM	**1**	**4**	**4**	**PROPER ANTIVIRUS SOFTWARE SHOULD BE INSTALLED**
IF SYSTEM SHOWS WRONG INFORMATION TO ANY USER	**1**	**4.5**	**4.5**	**STRICT VERIFICATIONS AND VALIDATIONS WITH MANUAL HANDLING**
PROJECT COSTS HIGHER THAN EXPECTED	**2**	**3**	**6**	**STRICT ASSESSMENT OF COSTS DURING DEVELOPMENT AND EXTRA FUNDS SHOULD BE KEPT IN MIND INCASE IF THEY ARE NEEDED**

8.0 Project Management

8.1 PLATFORM/TECHNOLOGY SELECTION[18]

(SYEDA KHADEEJA NAQVI FESE-074)

HTML

IDE (VS CODE)

BOOTSTRAP

CSS (cascading style sheet)

PYTHON

DATABASE

OPERATING SYSTEM

MONITORING TOOL

TESTATION TOOL

TESTATION TOOL

CLOUD TOOL

TRACKING TOOL

HP Scrawlr

SECURE SOCKETS LAYER (SSL)

SQL INJECTION DEFENDER

WEB SERVER

JAVASCRIPT

8.2 COST ESTIMATION

(ALI ZIA KHAN FESE-052 &
MUHAMMAD SAMEED ABBASI FESE-059)

COCOMO MODEL:

COCOMO MODEL is used for the cost estimation of a software project which is going to be developed. It is based upon some parameters as well as equations. We can calculate the effort applied i.e the amount of labour required, development time i.e months required and staff size i.e persons required for the project.

Firstly the project is categorized into 3 levels of basic, intermediate and detailed level as per the magnitude and complexity of the project.

The digital tax/revenue collection system is actually a critical and complex project so it can be classified as an intermediate level project.

Another classification of project is based upon its type or nature that are Organic, Semi- detached & Embedded.

Our project can truly be called organic as it is composed of many different sub-systems linked together.

NOW COST ESTIMATIONS ARE COMPUTED AS UNDER:

PROJECT LEVEL**: INTERMEDIATE**

PROJECT TYPE**: ORGANIC**

FOR EFFORT APPLIED:

EFFORT APPLIED: a (KLOC)^b * EAF WHERE (EAF=EFFORT ADJUSTMENT FACTOR & KLOC= KILO LINES OF CODE) WHILE a AND b ARE CONSTANT HAVING VALUE OF 2.8 AND 1.20 RESPECTIVELY.

SINCE LINES OF CODES ARE 20900 APPROXIMATELY ,SO **KLOC=20.9**

E=2.4(20.9)^1.05 * 1.19=69.49 persons_month

FOR DEVELOPMENT TIME:

D=c(E)^d =2.5(69.49)^0.38=12.53 months (where c & d are constants having value of 2.5 & 0.32 respectively)

FOR STAFF SIZE:

SS=E/D=69.49/12.53=5.55 OR 6 Persons are required.

ACTUAL COSTS:

AVERAGE COSTS:

Hardware: 8000000Rs

Software costs: 500000Rs

Miscellaneous cost: 60000Rs

Employee Cost: 6*12.53*100,000Rs = 7500000Rs

Total Costs: 16060000Rs

ACTUAL COST = **RUPEES 16,060,000**

8.3 HUMAN RESOURCE MANAGEMENT

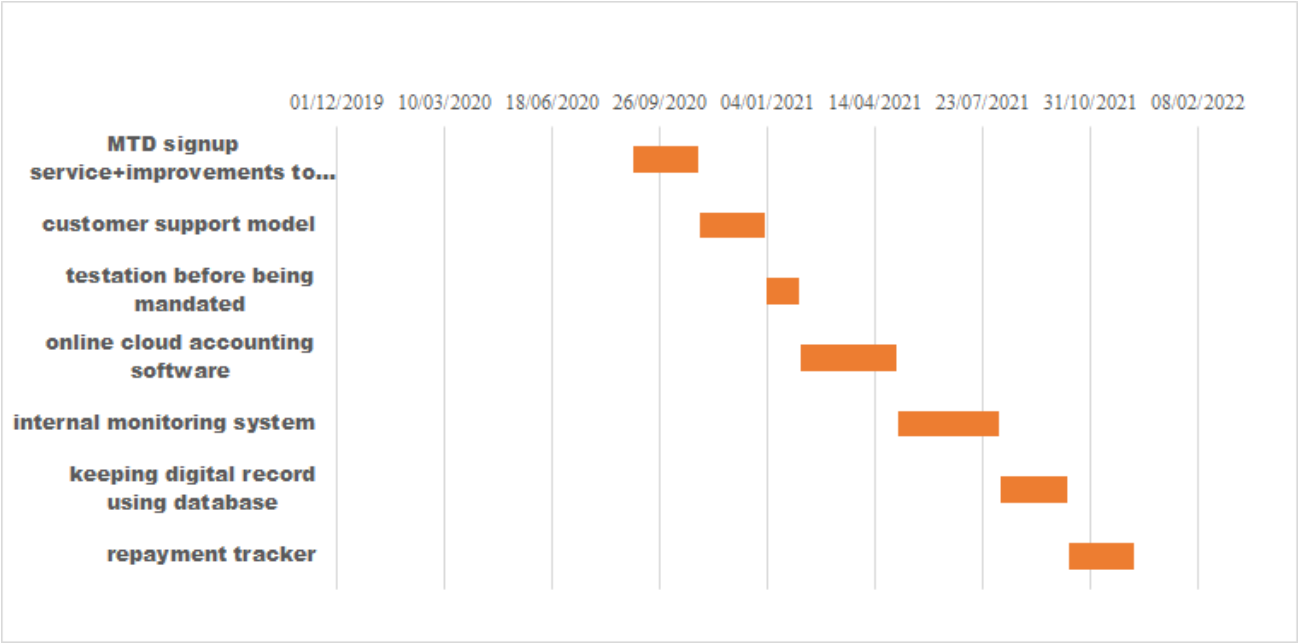
(SYEDA KHADEEJA NAQVI FESE-074)

TASKS	TASK FORCE	START DATE	END DATE	DURATION
MTD sign up service+ improvements to ASA	Nimrah Altaf Adam	01/09/2020	01/11/2020	61 days
Customer support model	Bushra Asif	02/11/2020	02/01/2021	61 days
Testation before being mandated	Fariya Khan	03/01/2021	03/02/2021	31 days
Online, cloud accounting software	Muhammad Sameed Abbasi	04/02/2021	04/05/2021	89 days
Internal monitoring system	Ali Zia Khan	05/05/2021	7/08/2021	94 days

Keeping digital record using database	Fasih-ur-reh man Ansari	8/08/2021	10/10/2021	63 days
Repayment tracker	Syeda Khadeeja Naqvi	11/10/2021	11/12/2021	61 days

8.4 TIME SCHEDULING-GANTT CHART

(SYEDA KHADEEJA NAQVI FESE-074)



9.0 Significance of Project

(Fasih Ur Rehman Ansari FESE-090)

1) The digital tax filing expenses and margins of error are considerably lower than those for paper filing.
2) Electronic reporting ensures timely refunds and immediate confirmation of receipt of a deposit.
3) The taxpayer is given the authority to seek publicly accessible information about taxes, policies, etc. by email.
4) In the case of a tax or accounting reporting adjustment, or the adoption of new reporting forms, the taxpayer will immediately be given an opportunity to review the list of forms before the e-filing due date.
5) The electronic filing of tax records and bank records does not include the replication of hard copy.**[16]**

10.0 Recommendations

(Fasih Ur Rehman Ansari FESE-090)

The system meets desired expectations but would perform better if the following recommendations and suggestions are considered:

- One more part on which further work can be done is that the user should be given an easy interface to interact with the system.
- The main issue that comes across is the trust of users on digital systems. They feel like they are taking a risk by sharing their personal data on such platforms from where it could be easily accessible to any unconcerned entities.
- A taxation form should be provided in urdu too so that every common person can make most out of this system.
- The E-taxation system can also be interfaced with other governmental agencies and institutions to furnish them with information that wouldn't necessarily be available to them.

11.0 Conclusion

(Fasih Ur Rehman Ansari FESE-090)

A tax is a financial fee which is mandatory for everyone.Taxation transfers money to the Government from homeowners or companies. It has consequences that can boost as well as diminish economic development and economic welfare. Since we are a 3rd world country and unable to meet the standard tax requirement, it has affected our economy quite adversely. To overcome this situation there is a need to replace the current system of taxation with an automated system. This new system would not only help reduce the corruption rate but it will also have less margin for errors.

12.0 References (IEEE format)

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[2]https://classroom.google.com/u/3/c/MzM3NjU0OTU5OTRa/m/MTM2MDQwMjkxMjY5/details

[3] Register for Income Tax - Federal Board Of Revenue Government Of Pakistan

[4]Use of Technology in Tax Administrations 2: Core Information Technology Systems in Tax Administrations; Prepared by Margaret Cot

[5]How to Secure a Website

[6] Database Security Best Practices

[7] The Impact of Electronic Taxation on Reducing Tax Evasion Methods of Iraqi Companies Listed In the Iraqi Stock Exchange

[8] Impact of Electronic Taxation on Tax Evasion and Avoidance (A Case Study of Nigerian Banks)

[9] tax Havens: International Tax Avoidance and Evasion

[10] Digital Tax Around the World | Digital Economy & Digital Taxes

[11] (PDF) The Effect of E-taxation System on Tax Revenues and Costs: Turkey Case

[12] Design and implementation of a system to determine tax evasion through de stochastic techniques

[13] Causes of Tax Evasion in Pakistan A case study

[14] Making Tax Digital: An evaluation of the VAT service and update on the Income Tax Service

[15] DESIGN AND IMPLEMENTATION OF A COMPUTERIZE TAX COLLECTION AND MANAGEMENT SYSTEM

[16]Pakistan Tax Administration

[17] Tax administrative challenges of the digital economy: The Croatian experience | Request PDF

[18] 10 Steps to Secure Software

[19]THE IMPACT OF COMPUTER INFORMATION SYSTEMS IN THE REDUCTION OF THE TAX EVASION / EXPLORATORY STUDY IN JORDANIANS FIRMS

[20] Digitalisation of tax: international perspectives