



Human Computer Interaction

ASSIGNMENT NO 2

SUBMITTED BY;

**Muhammad
Ali Khan**

Registration No;

16550



HUMAN COMPUTER INTERACTION

TASK 01

Describing the product that is easy to use;

What is the product?

ATM

An automated teller machine (ATM) is an electronic telecommunications device that enables customers of financial institutions to perform financial transactions, such as cash withdrawals, deposits, funds transfers, or account information inquiries, at any time and without the need for direct interaction with bank staff. ATMs are known in different parts of the world as automated bank machines (ABM) or cash machines.

What task does the product perform?

ATMs are convenient, allowing consumers to perform quick self-service transactions such as deposits, cash withdrawals, bill payments, and transfers between accounts. Fees are commonly charged for cash withdrawals by the bank where the account is located, by the operator of the ATM, or by both. Some or all of these fees can be avoided by using an ATM operated directly by the bank that holds the account.

Present one way in which this product is easy for you to use?

This product is very easy to use because of multiple reasons as;

- ❖ The ability to access one's account 24/7 at multiple locations
- ❖ The convenience of drive-up ATMs - you don't even have to leave your car
- ❖ The ease of carrying a slim card as opposed to a wad of cash
- ❖ Improved customer service, as lines in traditional banks decrease
- ❖ Lowered costs, as fewer human tellers are needed
- ❖ More security when compared to cash; if an ATM card is reported as stolen, the thief won't be able to withdraw any cash.

How would someone else find this product difficult to use?

Though these machines make it easy for people to handle cash problems but there are some difficulties and problems too with ATMs that people face;

1. Problem faced by customers

- ❖ Sometimes customers are facing problem with ATM when their account is debited. They didn't receive cash while the account is debited.
- ❖ The most common problem known to all when one is new and do not know how to insert the ATM card. They wrongly insert the ATM card and This problem is more common with new ATM users who are not familiar with ATM machine

2) Money transfer problem is another big problem

It generally happens for four reasons.

❖ Payment Declined - By Your Bank

The most common reason for an unsuccessful card payment is that bank has declined it. This means they have sent a 'Do Not Honour' response to Transfer Wise. It's normal for them to stop a payment that they might perceive to be unusually large or to a new and unknown recipient - just in case.

❖ Browser Issues

Some anti-virus or firewall software can affect card payment.

❖ Insufficient Funds

Bank might also stop card payment if there isn't enough money in account or if one have a per-transaction limit.

3) Machine don't accept the ATM cards

Some time machine doesn't accept the ATM cards. A variety of factors can disrupt this process and result in the card being declined.

❖ Inadequate Balance

A common reason for a card being declined is a balance that is too low to support the requested transaction.

❖ Account Changes

If y account is frozen for any reason, ATM card will likely be declined.

❖ Wrong PIN

If enter the wrong PIN, or personal identification number, card may be declined

❖ Technical Glitches

Sometimes ATMs are undergoing service or experiencing a computer malfunction that results in declined cards.

5) Problems faced by BANK

❖ Theft money from ATM's

Bank thefts are getting sophisticated day by the day. Some customers even lost lots of amount after using that ATM.

❖ Cloning problem in ATM

A type of fraud which occurs when an ATM is compromised by a skimming device, a card reader which can be disguised to look like a part of the machine. The card reader saves the users' card number and pin code, which is then replicated into a counterfeit copy for theft. Cloning occurs mainly by replicas presented in ATM system. It will extract the data presented in the magnetic tape of a card .The data is send to the memory chip which is attached to the replica The closed circuit camera will extract the password which we are entered in our ATM system. They will prepare fake ATM's cards and draw the money from those cards.

❖ Problems of sms alert of atm

If server gets down. This kind of problem occurs in ATM system. You will be very disappointed when you didn't get any sms regarding whether your money debited or credited.

❖ **Problem of Skimmers**

Credit card skimming is a type of credit card theft where crooks use a small device to steal credit card information in an otherwise legitimate credit or debit card transaction. Credit card skimmers are often placed over the card swipe mechanism on ATMs and gas stations, but they skimmers can be placed over almost any type of credit card reader. With ATMs, the crooks may also place a small, undetectable camera nearby to record you entering your PIN. This gives the thief all the information needed to make fake cards and withdraw cash from the cardholder's checking account.

There are more problem too. These are, system problem (including server down), system failure(system crash or the software not work properly),hack the bank's site which affect whole banking system.

How could this difficulty be resolved?

These difficulties could be resolved by the following ways;

- ❖ A complete guide should be provided to the fresh users so they can encounter the problems easily while operating the ATM.
- ❖ The user should have complete check and balance over his transaction debits and credit so they can get the payment anywhere and anytime without facing difficulty.
- ❖ While changing accounts, forgetting PIN or any other technical glitches user should have the proper consultation with bank officials to tackle these problems.
- ❖ For theft cloning and skimming of ATM security checks should be make strong as most of the money dispensers contain spy cam to overcome these problems.

Describing the product that is difficult to use;

What is the product?

ALEXA

Amazon Alexa, also known simply as Alexa, is a virtual assistant AI technology developed by Amazon, first used in the Amazon Echo smart speakers developed by Amazon Lab126. Alexa is Amazon's cloud-based voice service platform that powers an entire smart device ecosystem. With its constantly-improving artificial intelligence capabilities, Alexa can respond to simple queries and perform complex routines to provide information, entertainment, and general assistance to its users.

What task does the product perform?

- ❖ Alexa is capable of voice interaction, music playback, making to-do lists, setting alarms, streaming podcasts, playing audio books, and providing weather, traffic, sports, and other real-time information, such as news.
- ❖ Alexa can also control several smart devices using itself as a home automation system. Users are able to extend the Alexa capabilities by installing "skills" (additional functionality developed by third-party vendors, in other settings more commonly called apps such as weather programs and audio features).
- ❖ Most devices with Alexa allow users to activate the device using a wake-word (such as *Alexa* or *Amazon*); other devices (such as the Amazon mobile app on iOS or Android and Amazon Dash Wand) require the user to push a button to activate Alexa's listening mode, although, some phones also allow a user to say a command, such as "Alexa" or "Alexa wake".
- ❖ Currently, interaction and communication with Alexa are available only in English, German, French, Italian, Spanish, Portuguese, Japanese, and Hindi. In Canada, Alexa is available in English and French.

Present one way in which this product is difficult for you to use?

Besides having ease of use Alexa creates many difficulties too;

- ❖ Takes several days to update the new version of Software into device.
- ❖ The major problem is home privacy.
- ❖ People can identify who is present on the home based on echo private conversations.
- ❖ Others can also access echo conversations.
- ❖ People can use your location using different techniques and deliver their location based services
- ❖ It's a cloud based devices so it can create problems if any trouble in cloud.
- ❖ Echo must be plugged in to use since it has no internal battery.
- ❖ Amazon retains digital recordings of users' audio spoken after the "wake up word"
- ❖ People using Echo dot found some errors in its internal speaker. It is low in volume and if the volume level is increased to the maximum, the customers faced some interruptions while listening to the music.
- ❖ You need to have unlimited internet data plan; as Echo Dot uses much internet.
- ❖ The Echo Dot is doing wonders in the US and UK, but the customers residing in any other country faced incompatibility issues in their country.
- ❖ You cannot add more than one item at a time from shopping list.
- ❖ Alexa's ordering function not working with add-on Items.
- ❖ Amazon Alexa echo dot biggest problem is Confusion with Specific homophones words and not useful response from common question sometimes asked by Alexa users.

How could this difficulty be resolved?

- ❖ For the connectivity issue with wifi one should reset all the network hardware the starting the echo dot router and modem then powering the things in reverse after 10 to 15 minutes make it working again.
- ❖ In case of not pairing with other devices one should take fresh start with deleting and re-adding the devices in Alexa app that are having pairing issues.
- ❖ If Alexa won't listen properly it repeats the verbatim on the command of 'what have you heard' and it make it easy to change the setting.
- ❖ Alexa wakes when she is not supposed to because of recognizing her name if someone mistakenly call her she start talking for the person. For this simply change the **wake** word or tap mute button while watching TV or music streaming.
- ❖ alarm and notification from Alexa are too loud than the regular volume to reach every corner of the home, but it can be manage to tap on sound and slide for all notifications.
- ❖ For privacy issues one must go through the privacy setting by following steps; Go to the **Alexa Privacy** settings page, and select Manage your **Alexa** data. Click on the automatically delete recordings setting. In the pop-up box, choose how long you want to keep your voice recordings.

How would someone else find this product easy to use?

Alexa made the life easier for human beings and is easy to use for many people in the following terms;

- ❖ Alexa works on voice without the use of hand. People can use Alexa to play music, control smart home devices, make calls, send and receive messages, provide information, read the news, set music alarms, read audiobooks from Audible, control Amazon Video on Fire TV, and more.
- ❖ It can easily be connected to speakers or headphones through Bluetooth or 3.5 mm stereo cable to play music from Amazon Music, Spotify, Pandora, iHeartRadio, and TuneIn.
- ❖ It can make calls to other Echo devices in home home using just voice.
- ❖ It controls lights, fans, TVs, switches, thermostats, garage doors, sprinklers, locks, and more with compatible connected devices from WeMo, Philips Hue, Sony, Samsung Smart Things, Nest, and others.
- ❖ Its 7 far-field microphones can hear you from across the room even in loud music as well.
- ❖ Has an in built speaker which enables you to set alarm for your early morning exercises.

With the few sentences, summarize an important difference between the two products that affected your answers.

Important differences between the two products

- ❖ ATM is automatic teller machine while ALEXA is an app that is used in echo devices made by amazon.

- ❖ ATM contains menu driven user interface while ALEXA is voice user interface.
 - ❖ ATM only deals with the financial transactions and debit credit issues whereas ALEXA perform a series of tasks regarding daily life activities like a personal assistant.
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TASK 02

- a) Visit your SIC. Identify all features and write down.
- b) After analyzing the whole application mention what is wrong in the application how it can be improved.
- c) What feature should be added, also mention it in your documents.
- d) Redesign mockup for SIC using any application of your expertise.

a) **SIC**

SIC stands for student information center are the system that is designed to enable the student to get e-learning in this pandemic situation due to Covid-19.

Features of SIC

❖ **Online student survey**

As soon as the students login to their account student survey form appears to have an overview of the students having problems with internet access issues and online learning problems to keep record of student and improve the system accordingly.

❖ **Dashboard**

On the top bar of this system some feature appears where students can access to different courses and study related queries. All the special announcements and notification appears on dashboard.

❖ **E-library**

There is an e-library where different sort of e-books are available for different fields for the ease of students to study online.

❖ **Semester**

By clicking the semester icon students can get access to subjects in which they are registered, can also be engage in class chat regarding the queries of subject which is a good way of direct interaction with class teacher and fellow students. Beside this there is full information of mid and final term datesheet.

❖ **Results**

This feature provides students with all the grading in assignments and exams.

❖ **Lectures**

By clicking lectures arrow a drop down menu appears with two boxes 1st is lectures , from where students can download lectures of desired subject and 2nd is check

assignment box, where students can check assignment topics, dates and submit completed assignment within due date.

❖ **Assessments**

In the drop down menu of assessment teacher assessment can be checked.

❖ **Feedback**

Student can give their feedback regarding the system and many queries and FAQs can be asked in feedback icon.

b) Drawbacks/lacking of SIC and improvements

❖ **Adaptability struggle**

Switching from traditional classroom and face to face instructor training to computer-based training in a virtual classroom makes the learning experience entirely different for students. Their resistance to change doesn't allow them to adapt to the online learning environment, whereas it takes time for them to get accustomed to Course Management Systems (CMS) and the methods of computer-based education. While passive listening and notes taking are expected in a traditional classroom, online discussions or creating a web page demand springing into action.

Improvement; there must be tutorials and video lessons for adaptation with elearning because most of the student does not know the procedure of switching to online learning.

❖ **Technical issue**

Many students are not provided with the high bandwidth or the strong internet connection that online courses require, and thus fail to catch up with their virtual classmates: Their weak monitors make it hard to follow the Course Management System and their learning experience becomes problematic.

Improvement; The only solution to this problem is knowing exactly what kind of technological support they will need for a certain course before enrolling in it, as well as properly equipping themselves for the course's successful completion.

❖ **Computer literacy**

Lack of computer literacy is a major issue among students today. Many of them cannot operate basic programs such as Microsoft Word and PowerPoint and therefore are not able to handle their files. Furthermore, many students find fixing basic computer problems troublesome, as they have no knowledge in this area. However, technological proficiency is a must for following online courses, as it enables students to manage their assignments and courseware in an organized manner without struggling.

Improvement; Basic courses in computer literacy enhance students' knowledge in the field; having a fundamental knowledge of computer hardware would help them participate in online classes without interruptions and hindrances.

❖ **Time management**

Time management is a difficult task for eLearners, as online courses require a lot of time and intensive work.

Improvement; A regular schedule planner would be a significant help to these learners, as they could even set reminders for their courses and assignments.

❖ **self motivation**

Self-motivation is an eLearning essential requirement; however, many online learners lack it, much to their surprise. After enrolling in distance learning courses, many learners fall behind and nurture the idea of giving up, as difficulties in handling a technological medium also seem insurmountable.

Improvement; eLearning is good news, but at its initial stage it poses certain threats to students. Attitude change and technological literacy would help them gain confidence in order to succeed in their courses with a positive vibe.

❖ **Control and authority**

Most of the functions and command of SIC are under control of the administration so student sometime cannot get access to the study stuff and can't enroll their self for the course.

Improvement; student should also given the control over some features like self enrollment, attendance and access to the lectures freely so they can get the enrollment in time access to study material.

c) What feature should be added

The following features should be added to SIC for minimizing the problems of elearning that most of the student are facing currently;

❖ **Progress analysis**

This feature will check the progress of student by measuring the time and credit hours spent on the subject downloaded material and attendance for class.

❖ **Notification for deadlines of assignments and exams**

Many students cannot submit their assignments on time because of technical issue so there must be alarm or notification for reminder of submission date.

❖ **Tutorial/video lectures**

Teachers should prepare tutorials for creating accounts login procedures and access to lectures because most of the student are not familiar with online system. And also upload video lectures for the clearance of concept that cannot be understandable from pdf and word file and notes.

❖ **Semester schedule planner**

A whole semester schedule planner must be set out for the understanding of both teachers and students. So the students can easily follow the plans for that particular semester.

d) Redesign mockup for SIC

