Modeling an Academic Test by Practicing Google Drive Cloud Computing

Waseem Saad Nsaif, Laith Rtalib Rasheed, Saja Salim Mohammed, Mohamed Hakem Mohamed

College of Physical Education and Sport Science, Diyala University, IRAQ.

Abstract— *In Considering of technological development Awarded in all aspects of life, especially in education and university education in particular, and starting from the principle of modernity and innovation in the educational process, the idea of this research generated to use the cloud computing applications in the preparation of tests for university students, advanced, accessible and relevant newness in devising the scientific of students to determine their scientific level in accuracy, without being bound by traditional tests, Where we'll prepare tests using a cloud computing applications which prepare ready models tests using Google drive ready test models, in several ways including selections or writing census paragraphs or short answers or complete vacuum or Pauline. Then after arranged and prepared the models test sent online to the students at various means of communication via the Internet, such as different kinds of email, Facebook, Twitter or Google Plus, and then the students answer and respond to the mail sender. The cloud computing technology is very useful for tests, especially as the availability of new services in testing, but nevertheless, we find that the number of tests that take advantage of cloud computing technology is still a few, perhaps this is because of submit to the tests through techniques will lead to a significant change in the test method, in addition to that it is not easy to move to the use of new technology with no able people to deal with those techniques , but perhaps in the near future, we will find many of the tests carried out by cloud computing techniques, This service can give you the free storage space of up to 5 GB is (Google Drive), so featuring that you can share files with your friends or make them public watched all the people, it is suitable service for a lot work because you can edit the MS Office files, and create files such as Word and PowerPoint and Excel, it supports multiple files and formats, to access this service must have a Gmail account, the service is available on the Mac or Windows devices and also you can reach them by phone. Also features by submit a form questionnaire or question by email, and participation the result of tests or questionnaire in an Excel paper, with the possibility of filtering, mathematical operations and other without the need for a program on your computer. And get a graphical summary of the result of questionnaire or test. Also can apply a theme to give a nice seen for the tests or questionnaire form. These tests constitute a clear difference from traditional tests in terms of the accuracy of assessing students, and their level of knowledge to be accurate, in addition to overcome all the problematic and cons of traditional tests. It is also developing the student's personality, spirit, minds, bodies and affection. Also develop the student talent tendencies, and provide a flexible learning environment, and prepare qualified and skilled teaching staff in the use of modern teaching strategies and methods.*
Keywords— *Google Drive, Cloud Computing, Academic Test.*

I. INTRODUCTION

Cloud computing is a type of Internet-based computing that provides shared computer processing resources and data to computers and other devices on demand. It is a model for enabling ubiquitous, on-demand access to a shared pool of configurable computing resources (e.g., computer networks, servers, storage, applications and services),[1][2] which can be rapidly provisioned and released with minimal management effort. Cloud computing and storage solutions provide users and enterprises with various capabilities to store and process their data in either privately owned, or third-party data centers[3] that may be located far from the user–ranging in distance from across a city to across the world. Cloud computing relies on sharing of resources to achieve coherence and economy of scale, similar to a utility (like the electricity grid) over an electricity network. Advocates claim that cloud computing allows companies to avoid up-front infrastructure costs (e.g., purchasing servers). As well, it enables organizations to focus on their core businesses instead of spending time and money on computer infrastructure.[4] Proponents also claim that cloud computing allows enterprises to get their applications up and running faster, with improved manageability and less

maintenance, and enables Information technology (IT) teams to more rapidly adjust resources to meet fluctuating and unpredictable business demand.[4][5][6] Cloud providers typically use a "pay as you go" model. This will lead to unexpectedly high charges if administrators do not adapt to the cloud pricing model.[7]In 2009, the availability of high-capacity networks, low-cost computers and storage devices as well as the widespread adoption of hardware virtualization, service-oriented architecture, and autonomic and utility computing led to a growth in cloud computing.[8][9][10]Companies can scale up as computing needs increase and then scale down again as demands decrease.[11] In 2013, it was reported that cloud computing had become a highly demanded service or utility due to the advantages of high computing power, cheap cost of services, high performance, scalability, accessibility as well as availability. Some cloud vendors are experiencing growth rates of 50% per year,[12] but being still in a stage of infancy, it has pitfalls that need to be addressed to make cloud computing services more reliable and user friendly.[13][14]

II. GOOGLE DRIVE

is a file storage and synchronization service operated by Google.[15] It allows users to store files in the cloud, synchronize files across devices, and share files. Google Drive encompasses Google Docs, Sheets and Slides, an office suite that permits collaborative editing of documents, spreadsheets, presentations, drawings, forms, and more.Google Drive offers users 15 GB of free storage,[26] with optional paid plans, between 100 GB and 30 TB, offering more storage.[17]Google Drive was launched on April 24, 2012,[18] and had 240 million monthly active users in October 2014.[4] Google said in September 2015 that they had over one million rganizational paying users of Google Drive.[19]Google Drive for Education was announced on September 30, 2014. It was made available for free to all Google Apps for Education users. It includes unlimited storage and support for individual files up to 5TB in size, in addition to full encryption.[20]

2.1 Computer apps

Google Drive is available for PCs running Windows Vista or later, and Macs running OS X Lion or later.[21]In October 2016, Google announced that versions 1.27 and lower of the Drive computer software will be discontinued and sync will stop on February 1, 2017. Going forward after that date, Google will drop support for versions of the software older

than 1 year.[22]Later in October 2016, Google announced that starting January 1, 2017, the computer software would end support for Windows versions XP and Vista. The software will continue to work on those platforms, but will not be actively tested and maintained.[23]Google indicated in April 2012 that work on Linux software was underway,[24] but there was no news on this as of November 2013.[25]In April 2012, Google's then-Senior Vice President" SundarPichai " said that Google Drive would be tightly integrated with Chrome OS version 20.[26]

2.2 Mobile apps

Google Drive is available for Android smartphones and tablets running Android 4.1 "Jelly Bean" or later,[27] and iPhones and iPads running iOS 8 or later.[28]In August 2016, Google Drive ended support for Android devices running Android 4.0 "Ice Cream Sandwich" or older versions,[29] citing Google's mobile app update policy, which states: "For Android devices, we provide updates for the current and 2 previous Android versions." According to the policy, the app will continue to work for devices running older Android versions, but any app updates are provided on a best-efforts basis. The policy also states a notice will be given for any planned end of service.[30]In January 2017, Google announced that certain legacy versions of the Google Drive mobile apps would be shut down on April 3, 2017, delivering a prompt that requires users to update their app to a newer version. App versions being shut down include Android versions earlier than 2.4.311 and iOS versions earlier than 4.16.[31]

2.3 Website interface

Google Drive has a website that allows users to see their files from any Internet-connected computer, without the need to download an app.The website received a visual overhaul in 2014, that gave it a completely new look and improved performance. It also simplified some of the most common tasks, such as clicking only once on a file to see recent activity or share the file, and added drag-and-drop functionality, where users can simply drag selected files to folders, for improved organization.[32][33]A new update in August 2016 changed several visual elements of the website; the logo was updated, search box design was refreshed, and the primary color was changed from red to blue. It also improved the functionality to download files locally from the website; users can now compress and download large Drive items into multiple 2 GB .zip files with an improved naming structure, better Google Forms handling, and empty folders will now be included in the .zip, thereby preserving the user's folder hierarchy.[34][35]An unlimited amount of photos at maximum 16 megapixels and videos at

maximum 1080p resolutions are stored for free using the "High quality" setting in Google Photos. Using the "Original quality" setting uses Google Drive quota.[36]As of 2016, these are the storage plans offered by Google:[37][38]

Storage	Price
15 GB	Free
100 GB	$1.99 per month ($19.99 per year with 16% discount)
1 TB	$9.99 per month ($99.99 per year with 17% discount)
10 TB	$99.99 per month
20 TB	$199.99 per month
30 TB	$299.99 per month

Storage purchases renew automatically at the end of the subscription period. Users can upgrade their storage plan anytime, with the new storage tier taking effect immediately. If the auto-renewal fails, a 7-day grace period is offered for users to update their payment information. When the storage subscription expires or is cancelled, storage limit is set back to the 15 GB free level at the end of the subscription period. Users can still access all their content, but will not be able to add anything beyond the storage limit, which means:[39]

III. WRITTEN TESTS

Indonesian Students taking a written testWritten tests are tests that are administered on paper or on a computer (as an eExam). A test taker who takes a written test could respond to specific items by writing or typing within a given space of the test or on a separate form or document.In some tests; where knowledge of many constants or technical terms is required to effectively answer questions, like Chemistry or Biology - the test developer may allow every test taker to bring with them a cheat sheet.A test developer's choice of which style or format to use when developing a written test is usually arbitrary given that there is no single invariant standard for testing. Be that as it may, certain test styles and format have become more widely used than others. Below is a list of those formats of test items that are widely used by educators and test developers to construct paper or computer-based tests. As a result, these tests may consist of only one type of test item format (e.g., multiple choice test, essay test) or may have a combination of different test item formats (e.g., a test that has multiple choice and essay items).

3.1 Multiple choice

In a test that has items formatted as multiple choice questions, a candidate would be given a number of set answers for each question, and the candidate must choose which answer or group of answers is correct. There are two families of multiple choice questions. The first family is known as the True/False question and it requires a test taker to choose all answers that are appropriate. The second family is known as One-Best-Answer question and it requires a test taker to answer only one from a list of answers.There are several reasons to using multiple choice questions in tests. In terms of administration, multiple choice questions usually requires less time for test takers to answer, are easy to score and grade, provide greater coverage of material, allows for a wide range of difficulty, and can easily diagnose a test taker's difficulty with certain concepts. As an educational tool, multiple choice items test many levels of learning as well as a test taker's ability to integrate information, and it provides feedback to the test taker about why distractors were wrong and why correct answers were right. Nevertheless, there are difficulties associated with the use of multiple choice questions. In administrative terms, multiple choice items that are effective usually take a great time to construct.As an educational tool, multiple choice items do not allow test takers to demonstrate knowledge beyond the choices provided and may even encourage guessing or approximation due to the presence of at least one correct answer. For instance, test taker might not work out explicitly that ${\displaystyle 6.14\cdot 7.95=48.813}$ but knowing that ${\displaystyle 6\cdot 8=48}$ they would choose an answer close to 48. Moreover, test takers may misinterpret these items and in the process, perceive these items to be tricky or picky. Finally, multiple choice items do not test a test taker's attitudes towards learning because correct responses can be easily faked.

3.2 Alternative response

True/False questions present candidates with a binary choice - a statement are either true or false. This method presents problems, as depending on the number of questions, a significant number of candidates could get 100% just by guesswork, and should on average get 50%.

3.3 Matching type

A matching item is an item that provides a defined term and requires a test taker to match identifying characteristics to the correct term.

3.4 Completion type

A fill-in-the-blank item provides a test taker with identifying characteristics and requires the test taker to recall the correct term. There are two types of fill-in-the-blank tests. The easier version provides a word bank of possible words that will fill in the blanks. For some exams all words in the World Bank are used exactly once. If a teacher wanted to create a test of medium difficulty, they would provide a test with a word bank, but some words may be used more than once and others not at all. The hardest variety of such a test is a fill-in-the-blank test in which no word bank is provided at all. This generally requires a higher level of understanding and memory than a multiple choice test. Because of this, fill-in-the-blank tests[with no word bank] are often feared by students.

3.5 Essay

Items such as short answer or essay typically require a test taker to write a response to fulfill the requirements of the item. In administrative terms, essay items take less time to construct. As an assessment tool, essay items can test complex learning objectives as well as processes used to answer the question. The items can also provide a more realistic and generalizable task for test. Finally, these items make it difficult for test takers to guess the correct answers and require test takers to demonstrate their writing skills as well as correct spelling and grammar.The difficulties with essay items are primarily administrative. For one, these items take more time for test takers to answer.When these questions are answered, the answers themselves are usually poorly written because test takers may not have time to organize and proofread their answers. In turn, it takes more time to score or grade these items. When these items are being scored or graded, the grading process itself becomes subjective as non-test related information may influence the process. Thus, considerable effort is required to minimize the subjectivity of the grading process. Finally, as an assessment tool, essay questions may potentially be unreliable in assessing the entire content of a subject matter

IV. HOW TO CREATE A FORM USING GOOGLE DRIVE

Three Parts: Accessing Google FormsDesigning Your FormSending Your Google FormCommunity Q&A. Thanks to Google Drive's "Forms" feature and the relative intuition with which one can use it, you can easily create a Google Form, Google Forms can be useful for a wide variety of applications, from data-gathering to event planning.

Part 1 Accessing Google Forms

Open your preferred browser. Google Forms are accessible through Google Drive; any created Google Forms will stay in Google Drive.

2- Navigate to your Gmail account. For best results, do this on a computer.You will need to enter your email address and password if you aren't already logged in.
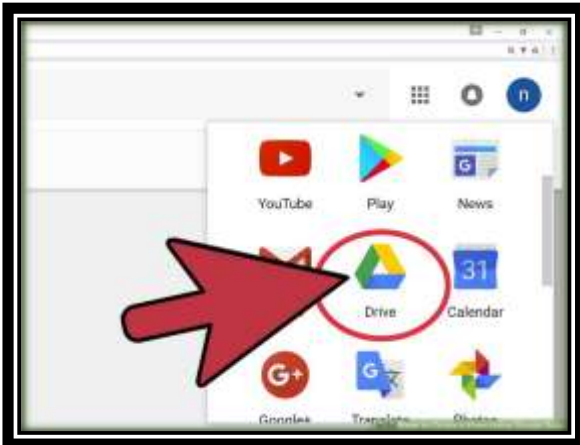

3- Click the Google apps menu. This is the nine-dot grid in the top right corner of your screen, to the left of your Gmail account picture.
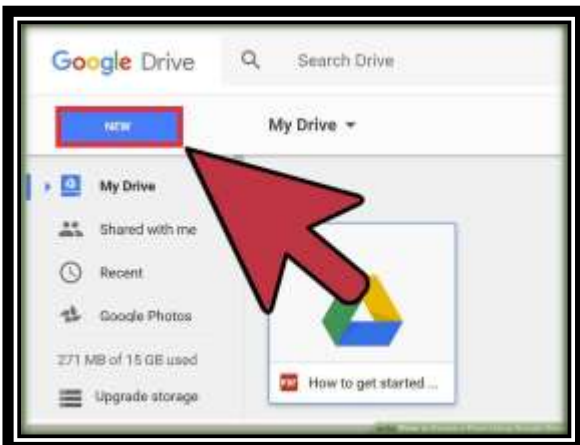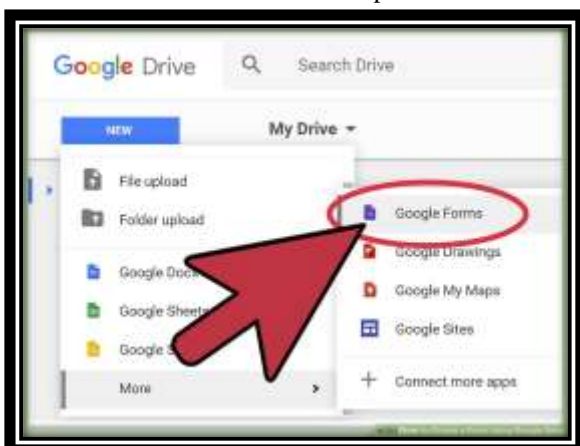
4- Click the "Drive" option. This will open your Google Drive account.Depending on your frequently-used apps, you may see the "Forms" option here. If so, click it to open Google Forms.

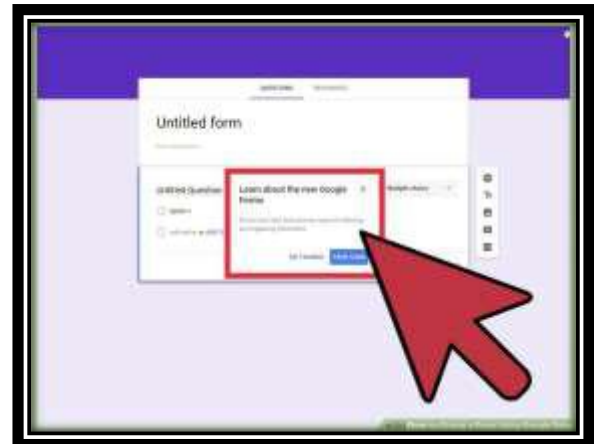5- Click the "New" button. This is on the top left side of your Drive page, right above the "My Drive" option.

6- Hover over "More", then click "Google Forms". This will open a new, untitled Google Form. If you need to open a new form from the Google Forms home page, click the "+" button on the left side of the form templates.
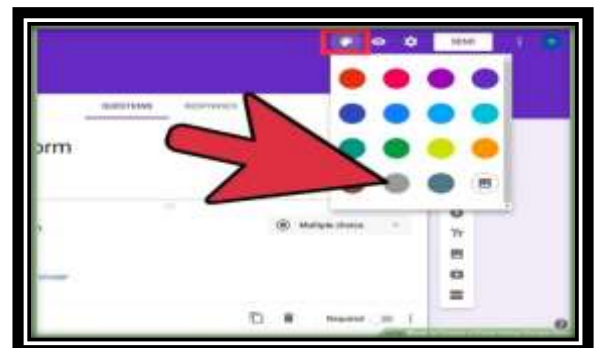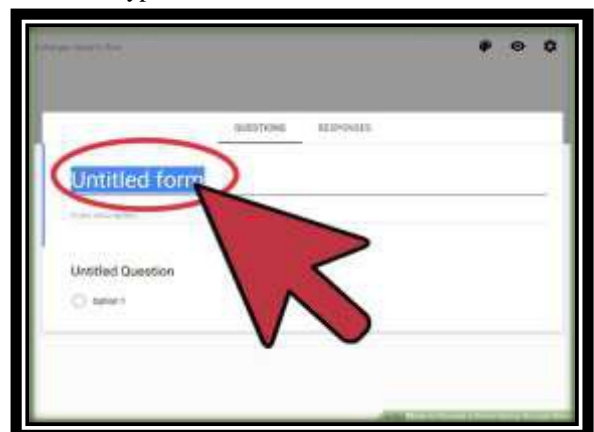

Part 2 Designing Form

1- Decide on a purpose for your Google Form. Knowing what information you need to gather and the purpose it will serve will help you when deciding on formatting, step style, and so on.[1]

2- Change your form's color. You can do this by clicking the paintbrush palette icon to the left of the "Send" button, then selecting a color from the drop-down menu. Or, click the image icon next to the colors for a nice theme to use instead of a color.

3- Give your form a title. This option is at the top of the screen; you'll need to click the "Untitled Form" or "Form Title" text to type in this field.

4- Add a description to your form. Your respondents will be able to see this below the form title.Enter this information directly below the title field.

5- Add a question to your form. Questions are the basis of your data-gathering; users will answer these in whichever style you present the questions. To add a question:Click the "+" icon in the right-hand menu.Type your question text into the "Question" field.Replace the "Option 1" text with an answer.Tap the "Required" switch in the bottom-right corner for mandatory questions.

6- Select your questions type. You have several ways in which you can display your questions. To change your type of question:Click anywhere on a question card.Click the drop-down menu to the right of the question text.Select "Multiple Choice", "Checkboxes", or "Drop-Down". You can also choose longer answers like "Short answer" or "Paragraph".

7- Re-order your question cards if need be. You can do this by clicking the grid of six dots at the top of a card, then dragging it up or down and releasing it in its new location.
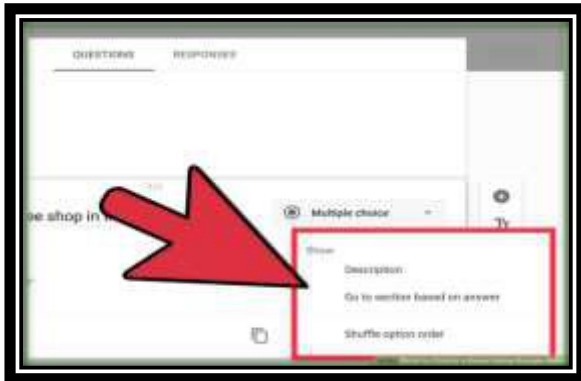

8- Review your other question card options. You can perform a couple of different actions on your question cards:Click the "Duplicate" button (two overlapping cards) to duplicate your current question card.Click the trash can icon to delete your current question card.Click the portrait icon next to an answer. This will allow you to add a photo; you'll need to hover over the question for this option to appear.

9- Review the additional options menu. You can do this by clicking the three vertical dots in the bottom right corner of your current question card:"Description" - Add a clarifying description to your question card."Go to section based on answer" - Link different question cards to different answers. You'll do this from drop-down menus next to each answer

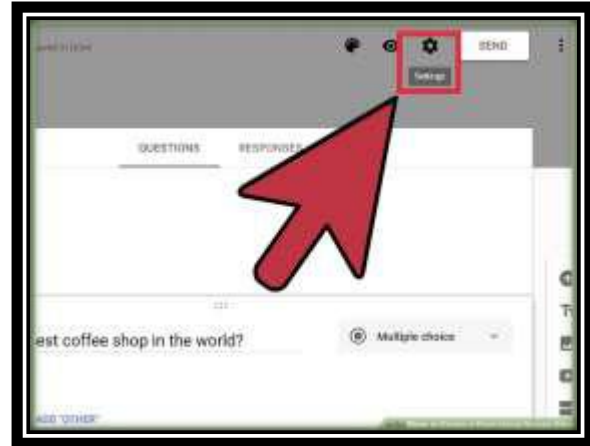on a card."Shuffle option order" - Shuffle the answers for your current card.

10- Click the "Preview" option to proofread your Form. This is the eye-shaped icon in the top right screen toolbar. When you're done reading through your Form and making sure all of the formatting is correct, you'll be ready to distribute your Form.
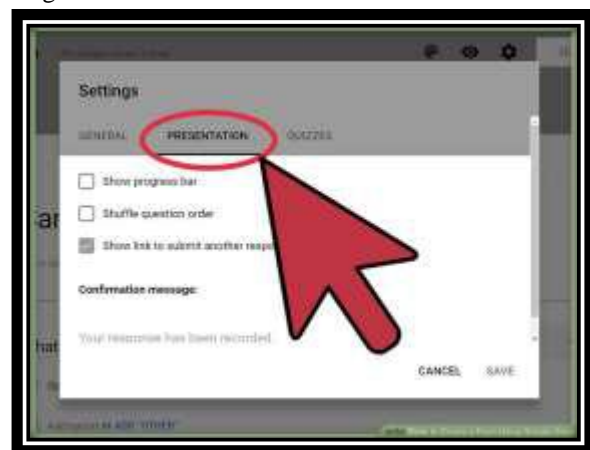

Part 3 Sending Your Google Form

1- Review your basic form settings. You can do this by clicking on the gear icon in the top right corner of the screen. Your form settings menu includes the following criteria:"Requires Sign-In" - Require respondents to sign into Google rather than being anonymous. Click the "Limit to 1 response" to enable this feature. Respondents can. Edit after submit" and "see summary charts and text responses" are your options here. These let respondents change their answers and view form results after submitting.

2- Review your presentation settings. These are also in the settings menu; switch from "General" to "Presentation" by clicking the pertinent option at the top of the settings window."Show progress bar" - Displays a metric that tells respondents how close they are to completing the form. "Shuffle question order" - Varies the question order from user to user."Show link to submit another response" - Creates a link to re-complete the form. This is ideal for invoicing forms."Confirmation message" - Customize your form's completion message by typing your preferred message into the field below this text.
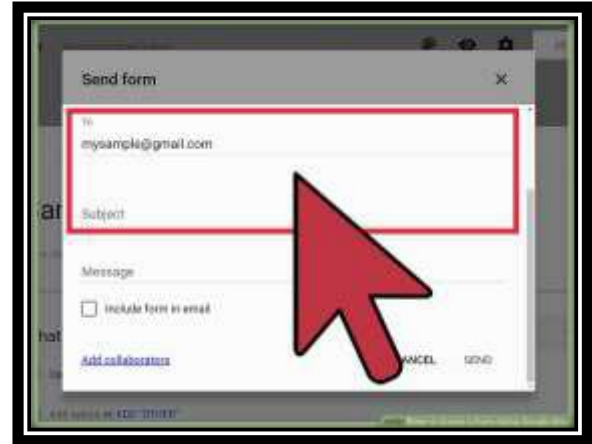

3- Click the "Send" button. This is in the top right corner of your screen; clicking "Send" will bring up a "Send form" menu with several different sharing options through which you can cycle from the top of the window.
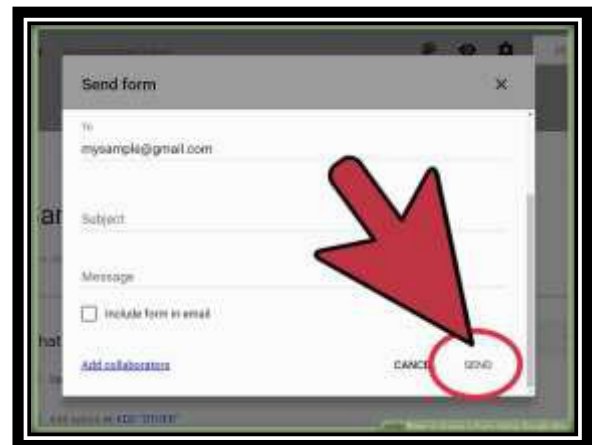
4- Review your sharing options. Depending on your form's purpose, your preferred option will vary:Email - Choose this option to send an email to your contacts directly from the Forms site.Link - Choose this option to get a link to copy-and-paste.Embed HTML - Only use this option if you're placing this form directly on your website.Google+, Facebook, or Twitter - These are quick-share options in the top right corner of your "Send form" menu.

5- Send your form using your selected service. Since you have a few different options for doing so, your process will vary:Email - Add a contact to the "To" field, a subject to the "Subject" field, and a brief message to the "Message" field. Click the "Include form in email" option to embed your form directly into the email. Link Right-click (or two-finger click) the link field and select "Copy". You can then paste this link in an email or on your preferred social media site.Embed - Right-click (or two-finger click) the HTML field and select "Copy". You can then paste this text into your website's HTML processor. Note that you can edit the width and height values of the form from here.

6- Click "Send" if you're using email. This will distribute your form to everyone in the form contact list!To distribute the form via link, you'll need to manually post the link on a social media site or into an email.

REFERENCES

[1] Hassan, Qusay (2011). "Demystifying Cloud Computing" (PDF). The Journal of Defense Software Engineering. CrossTalk. 2011 (Jan/Feb): 16–21. Retrieved 11 December 2014.

[2] Peter Mell and Timothy Grance (September 2011). The NIST Definition of Cloud Computing (Technical report). National Institute of Standards and Technology: U.S. Department of Commerce. doi:10.6028/NIST.SP.800-145. Special publication 800-145.

[3] M. Haghighat, S. Zonouz, & M. Abdel-Mottaleb (2015). CloudID: Trustworthy Cloud-based and Cross-Enterprise Biometric Identification. Expert Systems with Applications, 42(21), 7905–7916.

[4] "What is Cloud Computing?". Amazon Web Services. 2013-03-19. Retrieved 2013-03-20.

[5] Baburajan, Rajani (2011-08-24). "The Rising Cloud Storage Market Opportunity Strengthens Vendors". It.tmcnet.com. Retrieved 2011-12-02.

[6] Oestreich, Ken, (2010-11-15). "Converged Infrastructure". CTO Forum. Thectoforum.com. Retrieved 2011-12-02.

[7] "Where's The Rub: Cloud Computing's Hidden Costs". 2014-02-27. Retrieved 2014-07-14.

[8] "Cloud Computing: Clash of the clouds". The Economist. 2009-10-15. Retrieved 2009-11-03.

[9] "Gartner Says Cloud Computing Will Be As Influential As E-business". Gartner. Retrieved 2010-08-22.

[10] Gruman, Galen (2008-04-07). "What cloud computing really means". InfoWorld. Retrieved 2009-06-02.

[11] Dealey, C. "Cloud Computing Working Group", Network Centric Operations Industry Consortium - NCOIC, 2013

[12] "The economy is flat so why are financials Cloud vendors growing at more than 90 percent per annum?". FSN. March 5, 2013.

[13] "Realization of Interoperability & Portability Among Open Clouds by Using Agent's Mobility & Intelligence - TechRepublic". TechRepublic. Retrieved 2015-10-24.

[14] "Interoperability and Portability among Open Clouds Using FIPA Agent / 978-3-659-24863-4 / 9783659248634 / 3659248630". www.lap-publishing.com. Retrieved 2015-10-24.

[15] Pichai, Sundar (April 24, 2012). "Introducing Google Drive... yes, really". Official Google Blog. Google. Retrieved January 16, 2017.

[16] Bavor, Clay (May 13, 2013). "Bringing it all together: 15 GB now shared between Drive, Gmail, and Google+ Photos". Google Drive Blog. Google. Retrieved January 16, 2017.

[17] "Google Drive storage plans & pricing". Drive Help. Google. Retrieved January 16, 2017.

[18] Protalinski, Emil (October 1, 2014). "Google announces 10% price cut for all Compute Engine instances, Google Drive has passed 240M active users". The Next Web. Retrieved October 30, 2016.

[19] Johnston, Scott (September 21, 2015). "Making Google Drive the safest place for all your work". Medium. Retrieved October 28, 2016.

[20] Summers, Nick (September 30, 2014). "Google unveils Drive for Education with free, unlimited storage and 'Classroom' integration". The Next Web. Retrieved October 23, 2016.

[21] "System requirements and browsers". Drive Help. Google. Retrieved January 16, 2017.

[22] "Service for Google Drive for Mac/PC versions 1.27 and older ending after February 1, 2017". G Suite Updates. Google. October 18, 2016. Retrieved January 16, 2017.

[23] "Google Drive desktop app ending support for Windows XP and Vista". G Suite Updates. Google. October 27, 2016. Retrieved January 16, 2017.

[24] Noyes, Katherine (April 25, 2012). "Google Drive for Linux Is on the Way". PC World. International Data Group. Retrieved January 16, 2017.

[25] Shankland, Stephen (November 28, 2013). "Google Drive for Linux? Patience, patience...". CNET. CBS Interactive. Retrieved January 16, 2017.

[26] Metz, Cade (April 25, 2012). "Google Set to Meld GDriveWith Chrome OS". Wired. Condé Nast. Retrieved January 16, 2017.

[27] "System requirements and browsers". Drive Help. Google. Retrieved January 16, 2017.

[28] "System requirements and browsers". Drive Help. Google. Retrieved January 16, 2017.

[29] Whitwam, Ryan (August 23, 2016). "Drive app update ends support for ICS, adds in-app storage upgrades, and more". Android Police. Retrieved January 16, 2017.

[30] "Updates to G Suite mobile apps". G Suite Administrator Help. Google. Retrieved January 16, 2017.

[31] "Legacy versions of Google Drive, Docs, Sheets, and Slides mobile apps shutting down on April 3, 2017". G Suite Updates. Google. January 19, 2017. Retrieved January 20, 2017.

[32] "Meet the new Google Drive". Google Drive Blog. Google. June 25, 2014. Retrieved January 16, 2017.

[33] Crider, Michael (July 8, 2014). "Google Drive Gets A Shiny New Interface On The Web, Rolling Out To Users Starting Now". Android Police. Retrieved January 16, 2017.

[34] "Improvements to downloading files and folders in Google Drive on the web". G Suite Updates. Google. August 18, 2016. Retrieved January 16, 2017.

[35] Whitwam, Ryan (August 18, 2016). "Google Drive on the web gets UI tweaks, better file downloads, and more". Android Police. Retrieved January 16, 2017.

[36] Ruddock, David (December 21, 2016). "Nice: Google Drive adds annual billing - with discounts - for 100GB and 1TB plans". Android Police. Retrieved January 16, 2017.

[37] "Drive   storage". Google.   Retrieved January 16, 2017. (registration required)

[38] "Choose a storage size". Google Photos Help. Google. Retrieved January 16, 2017.

[39] "Purchase, cancellation, & refund policies". Drive Help. Google. Retrieved January 16, 2017.