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STAFF INCHARGE: MR. VIKRANT AGASKAR
EDITORS: MR. SAHIL KULABKAR
MR. SIDDHESH THAKARKAR
TECHNICAL TEAM: MS. ANUSHKA SUPE
MS. BRAMHETI PATIL

BUG BOUNTY PROGRAM

What is the Bug Bounty Program?

The Bug Bounty Program is a deal offered by many websites and software developers to recognize and reward people for reporting bugs, particularly exploits and vulnerabilities. This program allows developers to detect and fix bugs before they become known to the general public, preventing widespread abuse. Bug bounty programs are available through Mozilla, Facebook, Yahoo!, Google, Reddit, Square, Microsoft and many more.

History of the Bug Bounty

Hunter and Ready launched the first known bug bounty program for the Versatile Real-Time Executive operating system in 1983. Anyone who finds a bug and reports a bug will receive a Volkswagen Beetle (aka bug) in return. A little over a decade later, in 1995, Jarrett Riedlingheifer, a technical support engineer at Netscape Communications Corporation, coined the term "Bug Bounty."

Why does a company use a bug bounty program?

The Bug Bounty Program allows businesses to use hackers to find bugs in their code. This gives you access to

more hackers or testers one-on-one. It also increases the likelihood that attackers will find and report bugs before they exploit them. These programs are only beneficial if the program results in the organization finding problems it couldn't find on its own (and if it can fix those problems)! If an organization is not mature enough to be able to quickly fix identified issues, then a bug bounty program is not the right choice for their organization. This can also be a good choice for PR companies. As bug bounties become more common, having a bug bounty program can inform the public and regulators that an organization has a mature safety program in place. This trend will continue as some people are starting to see bug bounty programs as the industry standard that all organizations should invest in.

Why are researchers and hackers involved in bug bounty programs?

Find and report bugs through the Bug Bounty Program for both cash bonuses and recognition. In some cases, it can be a great way to show real-world experience during a job search, or even help introduce people from your organization's security team. This can be full-time income for some people, income in addition to work, and a way to show off your skills and get a full-time job. This can be fun too! This is a great (legal) opportunity to test your skills against large corporations and government agencies.



What are the downsides of a bug bounty program for independent researchers and hackers?

There are many hackers involved in these types of programs and it can be difficult to make significant money on the platform. In order to receive a reward a hacker must first report a bug to the program. This means you can actually spend weeks looking for an exploitable bug, but a second person reports it and you don't make any money. Major Bugs approximately 97% of platform participants have never sold a bug. In fact, according to a 2019 HackerOne report, only about 2.5% of more than 300,000 registered users were rewarded for time spent on the platform. Basically, most hackers don't make a lot of money on these platforms and don't earn enough to replace their full-time salaries (and also lack benefits like vacations, health insurance and retirement plans).

COMPOSABLE APPLICATIONS

A composable application is a concept or belief that the functional blocks of an application can be separated from the complete process or application. This implies that new, more capable apps can be developed with greater purpose and better

functionality. Composable applications and real-time software provide runny source pools that reduce operational complexity for standard workloads and improve operating speed for next generation applications and services. Dynamic customizations and configurations are attainable through a composable structure that provides easy reconfiguration.

What do you mean by Composable Applications?

According to Gartner, composable applications are built from business-centric modular components. In other words, composable applications are centralized around APIs - application programming interfaces, or software that enables communication between apps and microservices to increase business efficiency. In essence, you are taking reusable pieces and adding them to other parts of the business to maximize outputs and returns. In that sense, there is not a single overarching definition that captures what a “composable application” is rather, we’re talking about a classification that covers a range of software tools.

The implementation of composable applications is definitely a forward-looking trend, as more and more organizations seek the benefits of using digital transformation to improve outcomes. Composable applications are the emerging development process that promises to make existing resources more elastic to meet a variety of constantly changing demands.



Protecting the future of business operations with composable applications:

In practice, composable applications and infrastructure give organizations confidence their operations will remain secure, simple, and persistent. Security governance gets easier with cleaner, compartmentalized systems. Business continuity (BC) also becomes more managed with more granular app construction. Together, these benefits showcase key advantages of composable applications that drive their appeal.

Conclusion:

Composable Applications come with many advantages enclosing automation, nimbleness, ease to use and skills. Companies that embrace Companies worldwide are funding heavily in composable applications to improve focus and make purpose. Fusion groups with shared company objectives

are set up across the scope to enhance modification goals inside creation.

SNOWFLAKE

Snowflake is a cloud computing based data cloud company based in Bozeman, Montana. It was launched in October 2014 . The firm offers a cloud-based data storage and analytics service, generally termed "data-as-a-service". It allows corporate users to store and analyze data using cloud-based hardware and software. It runs on Amazon S3 , Microsoft Azure and Google Cloud.

It delivers the Data Cloud , a global network where thousands of organizations mobilize data with near-unlimited scale, concurrency, and performance. Inside the data cloud, organizations unite their siloed data, easily discover and securely share governed data, and execute diverse analytic workloads. Wherever data or users live, Snowflake delivers a single and seamless experience across multiple public clouds. Snowflake’s platform is the engine that powers and provides access to the data cloud, creating a solution for data warehousing, data lakes, data engineering, data science, data application development, and data sharing.

Snowflake’s Data Cloud is powered by an advanced data platform provided as Software-as-a-Service (SaaS). It enables data storage, processing, and analytic solutions that are faster, easier to use, and far more flexible than traditional offerings. Snowflake runs completely on cloud infrastructure. All components of Snowflake’s service (other than optional command line clients, drivers, and connectors), run in public cloud infrastructures. There is no hardware (virtual or physical) to select, install, configure, or manage. There is virtually no software to install, configure, or manage. Ongoing maintenance, management, upgrades, and tuning are handled by Snowflake.



But similar to shared-nothing architectures, Snowflake processes queries using MPP (massively parallel processing) compute clusters where each node in the cluster stores a portion of the entire data set locally. This approach offers the data management simplicity of a shared-disk architecture, but with the performance and scale-out benefits of a shared-nothing

architecture. When data is loaded into Snowflake, Snowflake reorganizes that data into its internal optimized, compressed, columnar format. Snowflake stores this optimized data in cloud storage. Snowflake manages all aspects of how this data is stored- the organization, file size, structure, compression, metadata, statistics, and other aspects of data storage are handled by Snowflake. The data objects stored by Snowflake are not directly visible nor accessible by customers; they are only accessible through SQL query operations run using Snowflake.

Query execution is performed in the processing layer. Snowflake processes queries using “virtual warehouses”. Each virtual warehouse is an MPP compute cluster composed of multiple compute nodes allocated by Snowflake from a cloud provider. Each virtual warehouse is an independent compute cluster that does not share compute resources with other virtual warehouses. As a result, each virtual warehouse has no impact on the performance of other virtual warehouses.

The cloud services layer is a collection of services that coordinate activities across Snowflake. These services tie together all of the different components of Snowflake in order to process user requests, from login to query dispatch. The cloud services layer also runs on compute instances provisioned by Snowflake from the cloud provider. Services managed in this layer include authentication, infrastructure management, metadata management, query parsing and optimization, access control.

EXTENDED REALITY

Extended reality, or XR, is an umbrella category that covers a spectrum of newer, immersive technologies, including virtual reality, augmented reality and mixed reality. From gaming to virtual production to product design, XR has enabled people to create, collaborate and explore in computer-generated environments like never before.

Latest Trends in XR

High-quality XR is becoming increasingly accessible. Consumers worldwide are purchasing AIOs to experience XR, from immersive gaming to remote learning to virtual training. Large enterprises are adding XR into their workflows and design processes. XR drastically improves design implementation with the inclusion of a digital twin. And one of today’s biggest trends is streaming XR experiences through 5G from the cloud. This removes the need to be tethered to workstations or limit experiences to a single space. By streaming over 5G from the cloud, people can use XR devices and get the computational power to run XR experiences from a data center, regardless of location and time. Advanced solutions like NVIDIA CloudXR are making immersive streaming more accessible, so more XR users can

experience high-fidelity environments from anywhere. AR is also becoming more common. After Pokémon GO became a household name, AR emerged in a number of additional consumer-focused areas. Many social media platforms added filters that users could overlay on their faces. Organizations in retail incorporated AR to showcase photorealistic rendered 3D products, enabling customers to place these products in a room and visualize it in any space. Plus, enterprises in various industries like architecture, manufacturing, healthcare and more are using the technology to vastly improve workflows and create unique, interactive experiences. For example, architects and design teams are integrating AR for construction project monitoring, so they can see onsite progress and compare it to digital designs. And though it’s still fairly new, MR is developing in the XR space. Trends are shown through the emergence of many new headsets built for MR, including the Varjo XR-3. With MR headsets, professionals in engineering, design, simulation and research can develop and interact with their 3D models in real life.



The Future of XR

As XR technology advances, another technology is propelling users into a new era: artificial intelligence. AI will play a major role in the XR space, from virtual assistants helping designers in VR to intelligent AR overlays that can walk individuals through do-it-yourself projects.³ For example, imagine wearing a headset and telling the content what to do through natural speech and gestures. With hands-free and speech-driven virtual agents at the ready, even non-experts will be able to create amazing designs, complete exceedingly complex projects and harness the capabilities of powerful applications. Platforms like NVIDIA Omniverse have already changed how users create 3D simulations and virtual worlds. Omniverse allows users from across the globe to develop and operate digital twin simulations. The platform provides users with the flexibility to portal into the physically accurate, fully ray-traced virtual world through 2D monitors, or their preferred XR experience, so they can experience vast virtual worlds immersively. Entering the next evolution of XR, the possibilities are virtually limitless.

INFORMATION TO DEFAMATION

Ever wondered that when you share a screenshot of your phone you also have shared your phone current status, your battery percentage, your notifications, your network connectivity and also the time the screenshot was taken. It's quite fascinating to know that from a time where people tried to steal your information we are moving to a time where you give it to them by yourself.

Telling from my experience there was an instant when my friends once tracked my location, guess how ? via snapchat and I was completely unaware of it. We can see people who have set their accounts private on instagram and revealing their personality, date of birth, their likes and dislikes, in their bio which can be seen by everybody, what an irony. And this does not limit here we share our photos on instagram, then our feelings and views on twitter and also location sometimes and for the matter of fact nowadays we share our everyday life on snapchat snaps.



I won't say that you shouldn't do this or it is wrong; just want to show some light to the fact that this is how much we tell ourselves to everyone. And this is not the only way like while giving a xerox of your aadhar card, you just gave your photo, address, phone number, place of birth. And also today we sign up on numerous websites providing them with a phone no., email id, names etc. And it's not just about if this information is misused but also that it is used also in showing your targeted advertisements. Information is very vital and it has its benefits but information about you is something important to and you should know how much to share or else the information can lead to defamation.

DATAFICATION

What Is Datafication?

The word "Datafication" does not have a definition or rather it is not yet a word that has found a place in a dictionary. And yet it is a word we are hearing a lot these days. What it simply means is this from our actions to our thoughts, everything is getting transformed into a numerically quantified format or "Data".

Datafication is helping us to understand the world in a way which was never done before. New technologies are now available to ingest, store, process and visualise that data. Organizations are using them to get benefits. For example marketers are analysing Facebook and Twitter data to determine and predict sales. Companies spanning from all sectors and sizes have started to realize the big benefits of data and its analytics. They are beginning to improve their capabilities to collect and analyse data.



Datafication has begun to revolutionize the world in ways we never imagined. Large data sets need storage, database software to store the data, and analytics tools to turn data into meaningful information for businesses. Data storage, data management and data analysis technologies now provides us with the tools to spot the patterns, trends and relationships in political, economic, social and environmental relationships.

With the data readily available, companies need enough levels of skilled professionals who can analyse and manage the data, to ensure it is of the greatest benefit. It will create jobs in the areas of data infrastructure, data management and data analytics. According to information technology research and advisory firm Gartner, Big Data will create more than 4.4 million jobs, opening up opportunities for analyst and data-savvy job seekers. Organizations need people who understand how to collect, store and analyse the data. We are truly entering into the era of Bigdata. Datafication and its analytics is going to play an important role for innovation and productivity in the future.

ARTICLES SUBMITTED BY:

ALOK PAL
MITIJ RAUL
PRATIMA BOMBE
SIDHESH THAKARKAR
SAHIL KULABKAR
YUKTA PATIL

Do share your views, feedback and articles by mailing at bytemagvcet@gmail.com