21 Infamous and Expensive Bugs

Web Applications Development

Software Bugs

- Lives today are technology driven. It has become the way of life. Everyone is dependent on it to a very great extent. That is how it seems in this current age as every aspect of a human life is inter-wined with technology so much so that we feel crippled in its absence.

- Inconvenience to the users, compromise on security, loss of life, money, reputation, business credibility are the consequences of software failures to name a few. Some bugs may cause only trivial problems, but flight control software and software for medical equipment are examples of things that simply cannot be allowed to fail due to programming errors. They can have a catastrophic impact.

1). Software Glitch Causes F-35 to Detect Targets Incorrectly

- A serious software glitch in the F-35 Joint Strike Fighter air crafts gathered wide public attention in the month of March this year. The planes when flying in formation were unable to detect potential targets from different angles. In fact the engineers identified that the software bug caused the aircraft to detect targets incorrectly. The sensors on the plane were unable to distinguish between isolated and multiple threats.

2). Nissan's Airbag Software Malfunction

- Nissan Motors has been under investigation by US safety regulators for recalling over one million vehicles in the past two years. The vehicles were recalled due to a software failure in the airbag sensory system. The automakers have reasoned that a software glitch in the system rendered it incapable of detecting an adult sitting in the passenger seat.

3). Tennessee County Court Kills Software System update worth $1Million

- After two years of labor and investment of $1 Million, Rutherford County of Tennessee, United States, had to kill a court software system update. The reason being that software glitches were discovered right when the deal took place as problems regarding the issuance of checks, errors on circuit court dockets and the creation of "phantom charges" arose in the weeks after the program went live. It was reported that even months after training, backlogs were reported in the system. It has compelled the county in killing the system as it fails to deliver.

4). Software Security Flaws Revealed in OLA's Mobile App

- Ola, India's largest taxi aggregator based in Bengaluru had serious security flaws in their system. The bugs that were identified made basic programmers to enjoy unlimited free rides- one at the expense of Ola and another at the expense of genuine users as reported by Varun Aggarwal & Malavika Murali in the March issue of The Economic Times. The issue was made public after their customers pointed out the weaknesses in their system.

5). Starbucks Breakdown caused by Software Bug

- Starbucks was forced to close roughly 60% of their stores located worldwide in the month of April this year. The register malfunction occurred because of an "internal failure during a daily system refresh" according to Starbucks. The software failure left thousands of stores across North America unable to proceed with their business as the cash registers were unable to process orders and take payment.

6). United Airlines Grounded All Flights

- United Airlines was forced to ground 4,900 flights worldwide for over an hour due to a computer malfunction in the automation portion of their ticketing and reservation system. The glitch disabled the airline from being able to generate boarding passes, screen passengers, or confirm that all passengers had arrived. Though the system was back up and running within an hour, the ripple effect of so many delayed flights and disgruntled customers took significantly longer to sort out.

7). New York Stock Exchange Suspends All Trading

- The New York Stock Exchange placed a halt on all trading due to an undisclosed "internal technical issue". All open orders were canceled with traders being promised that they would receive information as soon as possible. Responding to the conspiracy theories beginning to arise, the NYSE announced that their malfunction "was not the result of a cyber-breach." The stock exchange opened again over 4 hours later.

8). The Wall Street Journal Website Goes Dark

- Right around the time that the New York Stock Exchange ground to a halt, the website for the well-known financial news outlet "Wall Street Journal" went offline. Initially the website showed a 504 error, which was quickly replaced by a temporary homepage stating that the site was experiencing technical difficulties. The site was back to full functionality within an hour, though that was plenty of time to fan the sparks of conspiracy into flame.

9). Critical Microsoft Glitch Allows Hackers to Take Control

- Speaking of hackers, Microsoft released an emergency software patch this July to nearly all of their operating systems. The security flaw was discovered by security researchers, a critical vulnerability buried in the coding of Microsoft's handling of font files that could allow for hackers to forcefully take over a computer's operating system. Such a vulnerability exposes millions of Microsoft computers to becoming a hacker's playground, within nothing barring thieves from stealing data, illicitly installing software, and more.

10). Medicine Infusion Pumps Recalled for Deadly Flaw

- It hasn't been such a good run for CareFusion, a medical equipment manufacturer who has experienced several emergency recalls in recent years. In late May, CareFusion's Alaris Pump was recalled over a software error that caused the pump, designed to automatically deliver medicine and fluids to hospital patients, to delay an infusion. The consequences, which can range anywhere from medicine being withheld at critical points or accidental over-dosing, can be deadly.

11). Prestigious Eton College Accidentally Admits 400 Students

- They had only intended to admit 9 boys to Britain's most prestigious preparatory school, whose alumnus includes Prince William and British Prime Minister, David Cameron. Instead, a "systems error" caused a conditional acceptance letter to be sent to 400 families. The mistake was reportedly caught within minutes, though it left the college with the difficult task of personally contacting hundreds of excited families to break the news.

12). Visa Data Leaked via Software Error

- This past July the personal data of visa applicants from over 45 countries was leaked through VFS Global, a visa services company that contracts for international governments. Two technology consultants, themselves visa applicants through VFS Global, discovered the issue when they realized they could input an arbitrary application number and pull up an applicant's personal information including their name, address, date of birth, passport number, and more. The consultants reported the problem to VFS, though after 15 hours with no response, the pair made the move to publicize the story via news channels.

13). $65,000 Jackpot Declared To Be a Casino Software Error

- An elderly Australian woman hit the jackpot this July, only to have it taken away from her. The 82-year-old won a $65,054 jackpot at the Goodna Services Club, however upon reporting her winnings to the club, was informed that a jackpot of that size, on that particular machine, was impossible. As the game was allegedly designed to not exceed jackpots over the $10,000 mark, it was determined that the win must have been due to a software glitch - giving the casino a free pass on paying out the winnings.

14). Bug Makes 950 Million Android Phones Vulnerable to Hacking

- And yet again, the threat of hacking makes the news. Mobile security researchers discovered a flaw in Google's android software that allows hackers to hijack an Android phone simply by sending the device a media message. Dubbed "Stagefright", the message does not even need to be opened for the bug to take effect, exposing over 950 million devices to the possibility of having data stolen, cameras and microphones switched on and recorded, and more - all just by having access to the device's mobile number.

15). Kanye West Mic Failure

- On another, less serious note, Kanye West, music's current L'Enfant Terrible, experienced a microphone failure at one of his recent concerts. In true West fashion, the rapper responded by throwing a fit, smashing the microphone on stage, and storming off.

16). Software Bug Cripples Pricing of US Mutual Funds

- The biggest financial malfunction of Q3 took place at the Bank of New York Mellon (BNYM), turning the U.S. mutual fund industry on its head for nearly two weeks this past August. BNYM's software bug, which corrupted the pricing system of the mutual fund giant, affected asset management firms, investment companies, and banks across the United States; sparking hundreds of emergency meetings to sort pricing data and create contingency plans for mispriced sales. Industry analysts called the software glitch the "biggest software stock price issue in more than 10 years" - and that was even before the problem proceeded to drag on for over a week and a half.

17). Multiple Stores across the United States Report Double-Charging Bug

- Multiple accounts of grocery stores double-charging customers emerged in early September, with reports spanning from Food Lion in Virginia, to Jewel-Osco in Ohio, Hy-vee in Iowa, and Shaw's and Hannaford in Vermont. Each story reported that customers paying with debit cards were double-charged for their purchases - sometimes for amounts as high as $600 over their original total. Each of the stores in question cited the same payment processor: NCR Connected Payments. NCR was quick to issue a statement advising shoppers to stick to cash and hold tight until they had sorted and refunded the payments.

18). HSBC IT Bug Delays a Quarter Million Payments

- HSBC announced in late August that an IT bug had resulted in the delay of 275,000 payments just ahead of a holiday weekend. The glitch affected more than just individual HSBC account holders – multiple companies found themselves unable to pay their employees as a result of their funds being inaccessible. HSBC stated that the payments, which were due to be transferred on a Friday, would be 99% processed by the following day. As a one-off incident, a day delay in payment is a troubling but forgivable lapse. Unfortunately however, HSBC is just one of the several major British banks that has experienced software meltdowns in recent years - a story that is becoming increasingly common in British newspapers.

19). Automakers Sued For Deadly Flaw in Keyless Ignition Systems

- As of August, ten of the biggest names in the automotive industry are embroiled in a lawsuit over a potentially deadly defect in the keyless ignition systems of certain car models. The lawsuit claims that the companies in question intentionally buried a flaw in their keyless ignition system software, a flaw that allows the engine to remain running even once the key has been removed from the car. At least 13 deaths have been attributed to the resulting carbon monoxide build up.

20). Air Canada Refuses to Honor Glitch that Sold Flight Packages for 90% Off

- Air Canada's website pricing glitch was an unfortunate but relatively common error in the world of online shopping. It was the events that transpired afterwards however, that catapulted the story into the spotlight this past August. When Air Canada mistakenly advertised a 10-pack of flight passes valued at $8000 for only $800, several shoppers were quick to jump on the deal. Air Canada quickly realized their error, fixed the pricing, and canceled the transactions. Problem solved, right? Wrong. The incensed would-be ticket holders have saddled Air Canada with a class action lawsuit, stating that the airline has a contractual obligation to honor the price of the tickets purchased.

21). Yahoo Japan System Glitch Loses 2.58 Million Emails

- Yahoo Japan reported a software glitch this past August that resulted in the loss of 2.58 million emails from around 970,000 accounts. The system failure that resulted in the lost emails lasted for roughly 10 hours and cut off account access for 2.6 million users. At the time of the article publication, Yahoo Japan had not yet disclosed the source of the issue - only claiming that 60% of the emails were "spam" that would have been blocked by the recipient anyways. There was no word on whether the other 40% of emails would be recovered, leaving account holders to wonder what important, life changing news they may have missed.