# CSE2025 DATA STRUCTURES
## PROJECT 2

**Zahide Gür Taştan 150119827**

**1)Screen shot of taking the keyword of user**

```
Enter your keyword to search: of
```

**2)**

```
There is 35 relevant docs.
```

content_6407569772845
content_61146494118820
content_64210570816412
content_2759651201322
content_6359741600042
content_6437733372206
content_6465995772203
content_6256118698285
content_6461794914604
content_58564919667616
content_6130062168367
content_6455677129004
content_6091402481965
content_6400723226923

content_56402172685
20
content_641103728260
2
content_581716971140
0
content_457408286340
50
content_613535616644
1
content_642921434756
5
content_637910290052
2
content_643155463812
0
content_614351081092
17
content_640796167812
1
content_241371942532
0
content_644115500676
1

content_548894379652
6
content_639149772420
2
content_643205664388
0
content_617442086532
9
content_103390154372
2
content_561845407364
2
content_640440831620
4
content_608679923332
1
content_589720620676
1
content_643025047172
7
content_637213838980
5
content_640226922116
0
content_602481462916
4
content_563053694596
2
content_627493604996
3
content_600347020932
0

## 3) ENQUEUE

```c
void enqueue(docNode *node) {

    //create a node to inserting the queue.

    docNode *newNodetoInsert;

    newNodetoInsert = NULL;

    node->child=NULL;

    node->sibling=NULL;

    node->degree=0;


    //documentQueue is a final Heap after enqeueue or dequeue
implementation.

    newNodetoInsert = node;

    documentQueue = unionHeaps( documentQueue ,
newNodetoInsert );
}
```

## DEQUEUE

```c
docNode *dequeueMax(){

    if(documentQueue == NULL){

        printf("Queue is already null");

        return documentQueue;

    }

    docNode *prev = NULL;

    docNode *maxNode = documentQueue;

    int max = documentQueue->freq;

    docNode *iter = documentQueue;

    docNode *reversingResult = NULL;


    //finding the maximum element of the queue.

    while(iter->sibling != NULL){
```

```c
        if(iter->sibling->freq >= max){

            max = iter->sibling->freq;

            prev = iter;

            maxNode = iter->sibling;

        }

        iter = iter->sibling;

    }

    //if there is a only one element.

    if (prev == NULL && maxNode->sibling == NULL) {

        documentQueue = NULL;

    }

    //if it is the started element of heap.

    else if(prev == NULL) {

        documentQueue = maxNode->sibling;

    }

    else{

        prev->sibling = maxNode->sibling;

    }

    reversingResult = reversing(maxNode->child);

    documentQueue = unionHeaps(reversingResult,
documentQueue);

    return maxNode;

}
```

## 4)RESULTS

Relevant order: content_457408286340 (50), content_611464941188 (20), content_614351081092 (17), content_585649196676 (16), content_642105708164 (12)

**Doc content_457408286340: (50)**
Pros:Best black level and best handling of motion, stylish frame, natural colors Cons:None found The Bottom Line: Don't buy a big screen TV without considering the Sharp Aquos line!
When I remodelled my house, I created a dedicated theater room. Of course, the center of any theater room is the theater, or big screen television. I did a LOT of research before buying, including the agonizing study of dozens and dozens of televisions and trying to divine the ancient mystery: Plasma or LCD? Before you plunk down thousands of dollars for anything, you really need to do your homework. The first part of this review discusses LCD versus Plasma, and if you are already up to speed on such things, you can skip down. But I felt it was important to give you the benefit of my research if you are approaching this decision for the first time. My new theater room is 13 wide by 16 deep, with two level seating. The first row, where the wife and I sit, is 11 feet from the screen. Be sure to sit and look at the sets at the same distance you will be in your home. Bring a tape measure! Ideal height is to put the center of the picture just slightly above eye level. Avoid putting any tv high on a wall where you will have to look up to watch it. As most of you know, Plasma owned the market until recently. LCDs have come a long way in the last few years. You can google "Differences between LCD and Plasma" and get hundreds of hits, but to summarize, plasma tvs use pixel cells that are excited by electric current to basically glow a certain color (red, green, or blue). These pixel cells (which are like a tiny light bulb) are separated by black bars. This is the way traditional tube sets work except that in older tube sets an electron beam strikes a colored phosphor on the inner tube to create the light. Plasma sets had a reputation for "phosphor burn" which means if an image is on the screen too long in one place, it would permanently burn into the screen, and create a dark area. Additionally, plasma sets in the cheap range sometimes exhibited an audio buzzing during bright scenes. Burn in was not an issue with LCDs, but I believe newer plasmas have also solved this problem. LCDs use a "backlight" source of white light, which is "allowed" to pass through to certain colors. This was the early limitation of LCD response times, since the speed at which a Thin Film Transistor (TFT) can open or close determines how well the TV could handle fast action with clarity. So black levels on an LCD can be quite dramatic, because the TFT design can deny all light coming through. With Plasma, sometimes the black levels appear a bit grayish. But behind every LCD "black" spot is still a brightly lit backlight! Another issue is reflections. When viewing the set with lights in the room or sunlight coming in, can you see reflections in the screen that compete with the picture? Many plasma sets have very shiny screen surfaces, which reflect light. LCDs often have more of a low gloss screen, and can be less susceptible to reflected light in the vicinity. So back to my dilemma. LCD or Plasma. Well, by the time I bought my tv back in June of 2008, LCD response times were so good (around 4 milliseconds) that the Sharp model being reviewed here now boasts 120Hz frame rate conversion. What does that mean? Well, in short it means the set can reproduce fast action without blur, or without jerkiness associated with panning effects. The best at doing this is the Sony MotionFlow, but the cost of their equivallent TV (70 inch) was almost $30,000.00 when I bought mine, so it was out of the question. At that time, Sony only offered a 52 inch and a 70 inch. The 52 inch was around $4,000.00 and the 70 inch was eight times as much! For a long time I thought that I should simply save money and go with the 52 inch. I'm glad I went for the 65 inch size. Size does matter! At first, I thought 65 inches would be too big. If you are used to watching a small 35 inch tube set, as I was, you need to get used to the bigger screens before making that decision. However, let me say that I found the Sony MotionFlow produced an image that was sort of hyper realistic, sort of 3D looking. Their demo of a moving merry-go-round really makes the point, but in order to achieve completely blur free images during fast motion, the "computer" in the TV has to make some guesses as to what is going to happen next. Don't get me wrong, MotionFlow is an interesting technology, but the Sharp TV is so good, you really don't need to spend extra bucks to get MotionFlow unless you really like the Sony picture best anyway. So LCD or Plasma you ask? I read many reviews and blogs on this, and could not come to any definitive conclusion one way or the other. The only way to settle it was to go SEE some sets side by side. I went to Best Buy, Costco, Sears... basically anywhere I could see the TVs. I saw, during my investigation of Plasma sets, that during fast motion, many plasmas had a green blur that was just behind the moving image. I did not see anything like that with the newer LCDs. Beware of sales people trying to push you toward a particular model.

Sales people often knew less than I did, and would tell me things I knew were not correct to encourage the purchase of the model that was on their "Sell" list for the store.  In my town, we have a company called Pacific Sales, which is a subsidiary of Best Buy.  This is where I finally made my purchase.  The staff of their theater section is very very knowledgable, and allowed me literally hours of watching the sets, asking questions, and coming back week after week until I decided.   There was no pressure and lots of great information, as the sales person was familiar with all the features, including advanced settings. Based on my personal taste, I decided LCD was the way to go.  Now what brand?  I have owned several small Sharp Aquos (13 inch) tvs, and they had the sharpest picture of the models I tested. The final determination came down to Sony or Sharp as the best of the best, but the big screen Sony was out of my league price wise.   Final determination was the Sharp LC-65SE94U for it's outstanding picture.  It offered two things I really wanted.  First the blackest black levels and, short of the WAY expensive Sony, the best handling of motion blur and film conversion (24 frame action). Take my word for it, no picture looks realistic unless blacks are very black.  It's stylish and non-reflective black matte case and non-reflective screen sealed the deal. Most large screen TVs are what we call FULL 1080 HD, which translates to 1920x1080 resolution (that's the number of pixels horizontally and vertically).  The more pixels, the sharper the image.  Now does every TV need this much resolution?  No.  With smaller sets (i.e., below 42 inch), the human eye does not need so much precision, since the screen is smaller.  In smaller size sets, you can get away with "medium" HD, or 720p, which is much less expensive and although still HD, will list as 1366x768.   However, when you are talking about TVs above 42 inch, the larger screen size will require lots more pixels in order to look crisp.  You may or many not notice 720p in a smaller set, but you certainly will in larger screen sizes.  In big screens, 1080 is the only way to go and with the cost coming down, it will soon be the standard for all sets I believe. A common question is what is the difference between 1080p and 1080i.  The short answer is "not much".  It is simply the difference between whether the picture is made by drawing each individual pixel (P) or by interlacing screens like older televisions do (I). Blu-ray supports 1080p.  Most cable systems currently offer only 1080i, but it all looks great. A few comments on buying big screen tvs.  The price is negotiable.  When I first looked at the Sharp 65 inch, the best price offered was around $7,500.00.  I went to several places and mentioned the other guy's price.  The second guy offers the set at $6,900.00.   I went back and forth, and by the time I was done, the price I paid was $5,900.00 (all within a month), so it pays to take your time and work the price.   Of course, today the set sells in the $5,000.00 range but that's the nature of technology.   I wanted it back in July, not 7 months later! So once I made the best deal I could, I anxiously awaited my new TV delivery.  I did the wall mounting myself, and I had  prewired the room for dolby 5.1 surround sound.  I turned the TV on, selected the Planet Earth blu-ray disk, and it literally knocked my socks off.  Of course, I had looked at the floor model at Pacific Sales for a month off and on, but in my theater room, I was in awe.  This picture was nothing short of incredible.  With LCDs, like the set I am reviewing, the angle of viewing is virtually from side to side without loss of image.  This is not necessarily the case with plasma.  High definition programming is precise.  But an issue I worried about was how would low definition programming look.  Some HD sets look absolutely awful when displaying older TV programs.  Not the Sharp set. You can certainly tell what is and is not HD, but it's much better than I thought it would be.  Normal DVDs (not blu-rays) are very good looking.  The setup was simple and intuitive.  The set offers FIVE HD inputs including 3 HDMI cable inputs, so there's plenty of connection points.  Watch out for sets that offer only 2 HDMI jacks, as most everything is going HDMI for connectors.  I had a cable TV HD box, so I simply hooked up the HDMI cable and my blu-ray player, and I was good to go.  For my sound system, I used the variable audio output from the tv to feed my dolby 5.1 audio receiver, which allows me to control volume in the room without having to use a separate remote for the receiver. The connection points are conveniently located on the under side and on the right edge, out of sight, but easy to get to without removing the set off the wall mount. A couple of interesting features.  The TV allows you to turn off the picture, but still stay powered on, for example, if you want to make the room dark but listen to a music video or music only channel.  The TV screen can be turned off while the set is on.  This saves the back light.  Even though the set is rated for 60,000 hours back light life, you want to conserve the backlight whenever possible.  Remember, that whenever the set is turned on, even when the screen is black (like when the cable box is on screen saver), your backlight is lit. Other features that are nice include full control over color saturation, but frankly, I just "plug and played" this baby, and I did not have to tinker with any "advanced" features.  To suit my taste, I turned the brightness down a bit--it looks more natural and saves the wear on the backlight.  It also has a feature that allows the brightness to adjust to room ambient light.  In a bright room, it brightens up and if the room is

dark, it darkens slightly so the set is not too hot looking.  This feature works very well and I leave it on all the time.  The colors on this set look good right out of the box. It also will "sync" with an HDMI source.  This means that when I put a Blu-Ray disk in my Sharp Blu-ray player, the TV automatically changes input source to the blu-ray so that when the blu-ray is ready to play, the TV is on that input and ready to go.  Nice.   You can re-label inputs to custom names (instead of generic "INPUT 5").  Another feature is the ability of the set to connect to the internet.  I have not used this feature, but the instruction manual shows how the screen becomes basically a virtual keyboard.  Of course, you can connect USB devices and games.  I can only imagine what a video game would look like at 65 inches!  This is also something I have not tried yet.  The TV comes with its own speaker grill, which fits below the TV frame on the bottom, but no self-respecting audiophile will consider using them.  However, if you don't have a quality surround sound system, you don't have to buy speakers.  If you buy this big a set, I presume you have the best speakers and a great receiver.  I left the speaker grill off the set.  It looks better. The set has a built in digital tuner, so you can get the new off-air digital signals, but I presume you will have HD cable TV or HD satellite TV, so you won't be using the built in tuner anyway.  One last piece of advice.  These sets are heavy (112 pounds) and bulky, so you really want to buy from someplace you can drive to.  Ordering on the internet sounds appealing to save a few bucks, but consider the hassles and cost of shipping this bad boy back if it comes not working or breaks during the warranty.  Do yourself a favor and buy locally and also get an extended warranty for IN HOME repair, as you do not want to have to ship or carry such a heavy piece of technology.  There are lots of features, but nothing that isn't found on other televisions, so if you are considereing this TV or want to ask a specific question, don't hesitate to comment and I will be glad to answer it. I've now been using the TV for almost 6 months.  I have had no problems and my wife thinks this is the best purchase we ever made.  I'm a hero, thanks to the Sharp LC-65SE94U.  Thank you, Sharp engineers! SHARP SPECIFICATIONS: _____ AQUOS Net delivers customized Internet content and live customer support via Ethernet, viewable in full-screen, split screen or sidebar format. Full HD 1080p (1920 x 1080) Resolution for the sharpest picture possible. Next-generation 10-Bit ASV LCD Panel from Sharp's Kameyama factory, producing a 27,000:1 Dynamic Contrast Ratio and a 4ms response time. 120Hz Frame Rate Conversion for the ultimate in fast-motion picture quality. Cornerstone Design with space-saving slim bezel and thin profile for elegant placement in any room, featuring unique textured black finish. . Enhanced Black Level provides the deepest, most accurate black of any flat panel TV. Five-wavelength Backlight System enables the display of very deep greens and crimson reds, widening the available color spectrum. High Brightness (450 cd/m2) AQUOS LCD TVs are very bright. You can put them virtually anywhere - even near windows, doors or other light sources - and the picture is still vivid. Built-in ATSC/QAM/NTSC Tuners provide access to DTV and analog TV channels. AQUOS LinkTM Function enables convenient control of an AQUOS Blu-ray DiscTM player via HDMITM using the AQUOS TV remote. Five 1080p Compatible Inputs including 3 HDMITM inputs (v 1.3 with x.v. color) and two HD component inputs. Specifications Screen Size 65" Class (64-33/64" Diagonal) Panel Type Advanced Super View / Black TFT Panel Pixel Resolution 1920 x 1080 Brightness 450 cd/m2 Viewing Angles 176o H x 176o V Lamp Life 60,000 hours1 Audio System 15W + 15W

**Doc content_611464941188: (20)**
Pros:Great picture quality, thin profile Cons:Price is more than most, media sharing sucks The Bottom Line: If you just want a TV for movies and cable, this one has a great picture. But if you're looking for a media center, forget it.
Size considerations The television is huge and for a while, I was concerned that it might be too big for our room. But after a couple weeks, we got used to the size. The TV itself is very thin (less than 2" thick) and would look great mounted on the wall but for some issues mentioned below. The stand is quite large and moves the TV about 6" away from the wall but allows the TV to swivel about 10-15 degrees. The 58.6" width makes it tough to find furniture to accommodate this monster TV. Along with its bulk, it's also not light and you'll need two people to move it. Picture quality The picture is incredible-clear, sharp, great contrast, and, with the correct settings, very smooth motion. Even though the refresh rate is only 120Hz, the LED backlighting and processor speed makes the apparent refresh even faster. At first, I thought the whole 480 Clear Motion thing was a gimmick, but it is noticeably smoother during action scenes. The sharpness along with the large image size gives Blu-ray movies a three dimensional quality that truly immerses you, even without 3D turned on. The dynamic contrast and auto brightness/backlight works great, keeping the picture adequately bright for the room light level without sacrificing the black levels. Now I don't have to adjust the brightness to go from day to night. Connectivity Wireless connectivity is

was not always reliable. I ended up getting another router to act as a repeater hub and connected the TV and Blu-ray player using ethernet cable. It works very reliably now. I do like the way the Anynet + HDMI-CEC works with connected devices. Even though I have a programmable remote, I find myself using the TV remote since it controls the connected devices, except for the stupid Comcast cable box. The AllShare media sharing is one of the worst implementations I've ever used. It doesn't work with my iPod, iPhone or any of the Mac computers that are on the same network. Using Plex as a server on my Mac and even though all of my music is in MP3 format, none of it is recognized by the television. None of the .MOV or .M4V files show up either. At the very least, I thought I could set up a nice slideshow of photos as background images during a party, but even a thumb drive full of standard JPEGs comes up as an unsupported file format. All of these same files play fine on my Sony Blu-ray player. As far as Samsung's media sharing goes, it's is a great idea, but completely fails to deliver. Apps The TV apps aren't very useful, except for Amazon Video and Netflix. Everything else requires additional fees and I figure we pay for enough between cable, Netflix and Amazon Prime. The web browser and search function are totally useless since entering alpha characters using the on-screen keyboard is slow and tedious. I've also read that the Samsung remote keyboard doesn't even work with the web browser, but I have yet to confirm that. 3D The 6500 Series is supposed to have 2 pairs of 3D glasses included. However, the 6550 do NOT include 3D glasses with the television, while almost every other series of Samsung 3D televisions includes at least two. Fortunately, this television works with the least expensive 3D glasses I've found: Samsung SSG-4100GB. About $20 a pair. The 2D to 3D conversion is only marginally better than standard 2D. Not worth having to wear the glasses. Minor annoyances The TV's built-in speakers are down-firing. It makes dialogue hard to hear. There also isn't an option to use the speakers as the center channel speaker like I had on my last TV. Considering how muddy voices sound, I suppose that's actually a good thing. The processor sometimes gets bogged down and it stops responding to the remote, especially when using the apps. Try to load any folder with more than a dozen items in it, and the TV appears to hang. Many features, such as PIP and closed captioning, only work when TV is the source. However, since I use a cable box, these features aren't available. The printed user manual is nothing more than just a setup guide. Any topic about the operation of the TV doesn't seem to be very thorough. Many of the topics have just a list of the options available with no explanations for what each option does. Some of the connectors on the back of the set are recessed, others stick straight out the back including 2 HDMI, USB, the cable and ethernet connections. This makes it harder to place the TV flush against a wall unless you buy right-angle cables. Audio connections use a 1/8" jack instead of the usual RCA jacks or an optical connector. However, HDMI usually includes the audio. I can't comment on whether the audio return on the HDMI works, but it doesn't work on the optical output. Audio coming in on HDMI is stripped of surround channels when it leaves the optical output of the TV. There is only one control on the TV itself. A joystick that controls several of the TV's functions, but is not the most intuitive. The on-screen menu will immediately preview the changes made to picture, audio, network, etc., but the changes won't be saved until you press the enter button. This might escape you a couple of times before you realize you didn't actually save the setting.

**Doc content_614351081092: (17)**
Pros:Great picture, feature loaded Cons:Breaks, unable to be repaired by authorized repair repeatedly The Bottom Line: A feature filled television with wonderful picture quality and form factor but lasted only 3 months then was unrepairable. It was returned under warranty.
We purchased the Samsung UN55ES8000 as our primary TV in our family room. We decided on this set for its stunning graphics, beautiful form and numerous features. The TV itself is an LED TV with a 240MHz refresh rate and very good color out of the box that does not require too much modifications. First, the connectivity of the television is typical. Three HDMI ports with one capable of ARC, one for CEC, and one for DVI. There is also legacy component inputs as well as a direct coaxial input. Finally there is USB inputs and the TV has an expansion slot for future upgrades by Samsung. The overall formfactor was one of the reasons that we purchased the TV. It has a very thin bezel and overall thickness. At the bottom center of the television is a small Samsung symbol that glows when the television is turned on. At the top center of the television is a small camera and the IR receiver for the set. The television also comes with two remote controls. A standard button remote and a touch interface remote. Both performed equally well. On the rear of the television is a control pad for cycling through the menus for use without a remote. The software features of the 8000 is plentiful. It can be directly connected to the internet by ethernet or wireless. Setup is simple through the menus. The internet connection gives you

the ability to access youtube, netflix, hulu, etc directly through the television as well as the ability to use Samsungs phone remote apps.  The unique features of this television is the motion control and voice command control.  You can activate the motion control and use hand gestures to adjust menu items, volume, etc.  The voice feature is similar except it responds to your voice commands.    The first 3 months we had this television there were no issues.  The voice control was convenient especially if we didn't want to hunt down the remote.  The motion control was fairly useless.  This may be due to the position of the television and the brightness of the room the set was in. We were extremely pleased with the picture quality of the set.   3 months into owning the set is when the gremlins began appearing.  At first, there was the occasional freezing of the screen followed by the set powering on and off spontaneously.  Over the course of two weeks, the television began doing this continuously and was unwatchable.  The only way to stop the process was to unplug it.  Samsung sent a repair service to fix the set and they replaced the main board.  The set worked for under 12 hours before it began having the same issues again.  Again Samsung sent the TV back for repairs and they again replaced the mainboard.  On return of the set, the television worked for 8 hours before the problems began again.  Samsung customer service finally issued a full refund for the set.  The repair and return process from the onset of the problem took about two months.  We have never owned a Samsung TV set before and unlikely to buy another set.  I don't know if we just received a bad set but, it was not a good sign when the return freight shipper stated this is the 30th Samsung set of this type theyve had to pickup and send back to Samsung.

**Doc content_585649196676: (16)**
Pros:Lots of value for the price, great picture, lots of video adjustments. Cons:Really can't think of any. The Bottom Line: The LG 55LW5600 sports lots of well implemented features for the price. Video adjustments a'plenty for more hand on customers and enough internet content to replace a roku.
That I'm about to write a favorable opinion on the LG 55LW5600 is quite remarkable in light of my bias for plasma TVs. I've associated LCD/LED TVs with high contrast and overly-saturated imagery which was OK for sporting events, but ruins most anything else. Electronic consumer stores like BestBuy have only reinforced my views by setting their TV's to display over-the-top contrast and saturated pictures. But when it was time to upgrade my ancient Panasonic plasma, I read a lot of articles on the web that convinced me that LCD/LEDs have come a long way, and LCDs had three features I particularly wanted: matte screens for superior display in brightly lit rooms, energy efficiency, and light weight for easy mounting. All that said, I'll briefly touch on the most salient features of the 5600. Image quality: The 5600 is capable of producing well balanced imagery. The default settings are too punchy, but LG has developed a reputation for providing a complete toolbox of picture controls, and the 5600 is no exception. Beyond the standard adjustments, you have access to two expert modes which give you adjustments such as 10 point color temperature settings. But the standard control settings provide more than enough control to produce a pleasing, natural, evenly lit picture. This plasma lover is impressed. In sunlight, it exceeds what my plasma can produce, and in dim light, it isn't too far off. Overall, a solid performer. My quick tuning advise: disable TruMotion (dejudder), reduce contrast down to 93, reduce sharpness down 58, set Local Dimming to high, and turn off super resolution.   A word about local dimming - you get what you pay for, and at this price, it isn't a sophisticated implementation.  The lg 55 inch display has 16 zones... compare that to  high end solution that would have 240+ zones in the same space, and you'll see that not all local dimming implementations are the same. Kudos for an auto-energy saving mode that works great. It dims the picture to match the ambient light brightness in the room. I keep it in that mode all the time, not just to save energy, but to get an image best tuned for the lighting conditions.    Until video games embrace 3d, I have no use for this new dimension of viewing.  I did don the glasses for one movie - the 3d effect was fine - even with mild off angle viewing.  I am a proponent of passive 3d which allows for very simple, lightweight, and cheap polarized glasses.  A pair is available for $10 - if I had kids, I wouldn't consider more expensive/complicated systems.     Audio: What? Which is to say, weak. Ok for broadcast TV, but it can't handle dynamic sound that comes from movies. There are ports on the back to export the audio to an external amplifier. Use it.   One nice touch - the LG comes with an video/audio sync tuning menu control. Remote Controls: The 5600 comes with 2 remote controls and a remote control app that runs on your Android or Iphone device. One of the two remote controls is your typical button filled device. Works great. The second remote control is a minimalist unit that navigate menus using motion sensors. Basically a Nintendo Wii like experience. Not for everyone. But the smartphone App is amazing. It give you a

touch pad experience which is great for navigating the 5600's internet suite. When you have to input text, the app pulls up your smart phone's keyboard, which is ten times faster to use than the TV's built in keyboard. Best yet, on my android, I can speak the text and it shows up on the LG - it really is an excellent feature. Internet Suite: Since I already own a Roku, I wasn't shopping for a TV with apps. But I'm happy to say that LG's implementation of Amazon video store is so good, I've been able to move my Roku onto another TV. The internet browser in conjunction with the smartphone control app is actually decent for navigating news sites. It does have Adobe flash, but an older version that many video sites do not support. I wonder if they'll update that. You can connect to the internet via wire or a supplied USB wireless device (supports G & N protocols). Video Games: There is a video mode for games that shuts of all the tv enhancements to minimize game lag. Seems to work fine - I haven't noticed any lag. A Word About Size: 55 inches may seem a little excessive, but there is a point to this size, which is immersion.  Wider angles of picture are more engaging than smaller - and preserve the illusion or experience of the program.  If you are a movie fan, this point is very salient, and you'll find it takes the viewing experience to a new level. There are some admittedly self serving guides to how big a screen size you should buy relative to viewing distance, but there is a reason for it beyond just "bigger is better".  I would suggest reading some articles on this topic on consumer review sites that you trust.   Summary: The 5600 is overall a great, well integrated package. It can be adjusted to produce a very natural looking picture that looks great in both bright and dim lit rooms. The internet app suite is surprisingly useful, and features like the remote control wand and the smartphone remote control apps reflect great product design. Highly recommended.

### Doc content_642105708164: (12)

Pros:Great value for an impressive set Cons:Less 'smart' than some.  It would be nice to have an antiglare display. The Bottom Line: I bought it after doing lots of research and do not regret having spent the money.

My reviews tend to evolve.  I usually start off with my initial impressions of the device and then expand the review as I gain experience, making comments of such niceties as user friendliness, bugs, manufacturer support and so on. This review of my brand new (and unfortunately end-of-line) Panasonic plasma television is going to be one of those. My home theater has been getting very long in the tooth - the video display was an old (and extremely expensive at the time) Hitachi rear projection CRT in 4:3 format that had no HDMI inputs - that's not a bad thing, because NOTHING beats analog I/O in terms of lush and accurate color rendition. But the images have been weakening and to be honest, wasting a 52 inch screen in letterbox formats was a waste of screen real-estate - the massive 55 inch console was essentially delivering a 32 inch picture. This year it was time.  I rolled out the Hitachi and put up a brand new Panasonic.  I've other plasma displays in my home and I really prefer the images with this technology - my LED televisions are way too bright, have poor black level performance and don't look 'natural'. When my sales rep at a distribution house I deal with suggested that plasma technology was being discontinued and that now was the time, I decided to jump in. It turns out that plasma isn't actually going anywhere (yet).  While Panasonic is discontinuing THEIR plasma displays, Samsung is introducing new ones - and the very high end is populated by names we don't often hear that are also delivering plasma devices, though OLED and other technologies are indeed catching up. Note that the half-life (the point where the light output drops to half of when new) for current generation plasmas is about 30 years, based on 8 hours of viewing per day.  Today you can buy a 60 inch 1080p HD LED television for less than 800 bucks (and that number is going down).  So why would I spend $1,500 for essentially a slightly larger version of the same thing (and at that, not a third of what Panasonic commands for their top of the line model in that size).

## 5) Discussion

In this project, I observed the advantages of binomial queue which are the merge and union operations.

It takes to log(n) time to merge or union operation. Finding the maximum element in max-heap ordered binomial queue takes log(n) time. With n-node binomial heap, it consist of at most logn binomial trees. For the find the maximum element of the queue we only iterate the roots of each binomial trees.

And If that the maximum element is removed, the next highest priority element comes to the root of the binomial trees. In this project, I use the extract maximum function to find most 5 relevant node. After every extraction of maximum element, next highest priority elements takes its place. This is an advantage of using priority queue for the that type of project.