

# ASHA and BAZ

Meet Hedy Lamarr



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Meet Hedy Lamarr

(Book 2)



By Caroline Fernandez



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*In honour of Hedy Lamarr and all  
women in science and technology  
who overcome challenges to make  
amazing discoveries.*



*For those who have been patient with and  
supportive of me through tough times.  
And for Kaavya.*





## CHAPTER 1

---

# THE CODE CHALLENGE

**A**lmost every student group in the computer class was frustrated. Yet there was a strong feeling of competition. They all wanted to be the first to solve the *Code Challenge*, but no one could crack it. Not even Asha and Baz could figure it out. And they were the most creative and smartest pair in the class.

### THE CODE CHALLENGE:

Create a computer code that tells a virtual frog how to get from the start point to the finish point. The only way the frog can cross the water

is by jumping on different-sized logs. But be careful! Each row of logs floats in different directions. If the frog misses a log, SPLASH! It falls in the water and it's game over.

Project partners took turns dragging and dropping code blocks from the coding menu into the code box.

**The code blocks:**

- **Hop Forward**
- **Hop Backward**
- **Hop Right**
- **Hop Left**

There were sounds of frustrated kids and game over sounds buzzing throughout the classroom.

**GAME OVER.**

“NO!” said a boy.

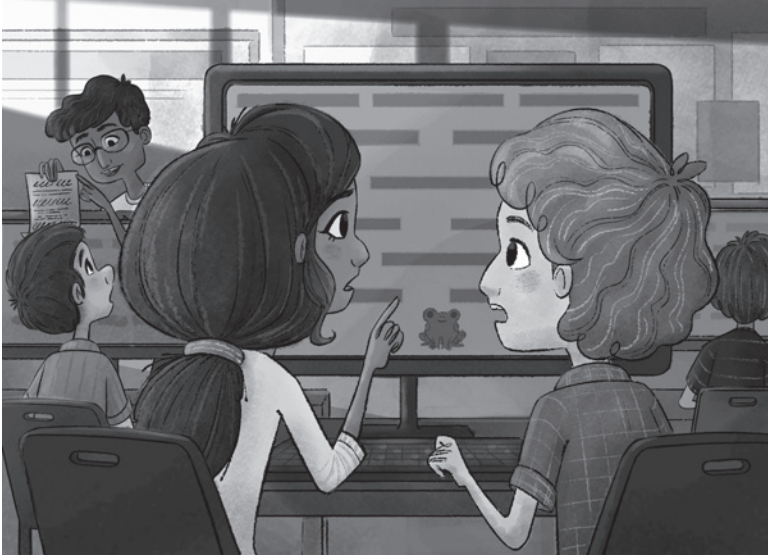
**GAME OVER.**

“What are we doing wrong?” asked a girl.

**GAME OVER.**

“Not fair,” moaned another boy.

“This frog is broken,” said the boy sitting at the computer next to Asha and Baz.



“You aren’t doing it right!” growled his project partner. The boys elbowed each other in anger.

Asha and Baz felt discouraged too. They could not figure out the right code to guide their frog across the logs.

“What if we make all the code blocks Hop Forward blocks?” Asha suggested.

“OK. Let’s try,” said Baz. He felt a bit sad.



Usually he and his best friend did really well on projects.

He dragged and dropped Hop Forward blocks into the code box.

Baz pressed the Try button at the bottom of the screen.

They both crossed their fingers and held their breath.

Their frog moved forward from the bottom of the screen onto a log. Good! Then it hopped onto another log. Very Good! And then another. Excellent! Baz and Asha started to feel hopeful.

On the next Hop Forward block, there was no log in front of their frog.

SPLASH! GAME OVER.

“Come on!” Baz hit the desk with his fist.

“Ha ha,” mocked the boy sitting beside them. “Have Baz the Brain and Asha the Amazing failed?”

“Be quiet!” snapped Asha. The boy’s teasing made her jaw go tight and her heart pound.

At that moment, Ms. Wilson, their teacher, walked by their computer.

“No name calling,” Ms. Wilson said looking straight at the boy. He shrunk down in his chair.

“What if we fail?” Baz asked Ms. Wilson.

“What if you succeed?” replied Ms. Wilson. She patted him on his shoulder. The encouraging touch made Baz feel a little better.

“Ms. Wilson, can you give us a hint on how to code the frog?” asked Asha. She hoped their teacher would take pity on them.

“Here’s a good hint,” Ms. Wilson said loudly. Asha and Baz sat up in their chairs to hear. The boy next to them straightened up as well. “Don’t give up!” said Ms. Wilson.

The class groaned. They had hoped their teacher was going to give them a real hint on how to code the frog.

“You got this!” she cheered the class on as she continued walking from group to group.

Baz looked at the screen. The computer code was like a puzzle, and he and Asha needed to fit the pieces together. He was usually so good at puzzles.

“What if we waited for all the logs to line up?” Baz suggested. “Then, there would be one straight path from start to finish.”

They both leaned in and watched the screen for all the logs to line up.

They waited one minute. Two minutes. Three minutes.

The logs were different sizes and floated in different directions. Therefore, they never all lined up at the same time.

“I give up!” Asha slapped her forehead and shook her head. “We are going to fail.” She felt gloomy.

Just then, the recess bell rang.

“OK, everyone out for fresh air,” Ms. Wilson called to the class. “You can come back to the Code Challenge after recess.”

“Nooooo,” groaned the class. Everyone was fed up with the Code Challenge.

“Grab the magic stick,” Baz whispered to Asha.

“It won’t be any help,” Asha grumbled. She felt defeated. But she went to her backpack and took out the magic stick anyway. It had been a helpful tool when brainstorming solutions to tough class projects before.

They walked out the computer lab door, down the hallway, and out the back door to the schoolyard. Once outside, they broke into

a run and raced to the other end of the playground where the grass met the sand.

Asha got there first because she was the faster runner, but Baz was just behind her.

“I don’t want to do coding anymore. I give up. It’s too hard,” she said.

“I can’t believe we haven’t figured it out,” said Baz. It was really bugging him that they couldn’t get the frog to the finish point.

“Maybe we just aren’t smart enough,” whispered Asha.

Baz pointed to the magic stick in Asha’s hand. “You remember what that does, right?” he asked.

They had found the stick in the schoolyard. But it wasn’t the sort of stick that just fell off a tree. This stick was polished and beautiful. And it had a strange wavy shape. It was a dark chocolate color at the bottom that flowed into a honey color at the top. This was no ordinary schoolyard stick. This stick was magic.

The last time they drew in the sand with it, they had been transported to 1957. There they met Mary Sherman Morgan and learned

about rocket power. Baz hoped it would do something similar this time.



“Draw the code blocks in the sand, Asha,” he instructed. “Maybe the magic stick will help us solve the code.”

Asha bent down to the sand and drew a big rectangle. Inside of it, she drew the blocks of code.

“Let’s step inside,” Baz said to Asha. “But stay close,” he added with a bit of worry in his voice.

Asha and Baz stepped inside the code drawing.

Asha crouched down and touched the magic stick to the sand. “Code,” she said. In that exact moment, the south wind blew in and swept the sand up into a gentle mini-tornado. The tornado swirled around them, and in an instant, they traveled through space and time.

“Magic,” said Baz.

“Look,” Asha said pointing down to the sand. “The drawing is gone.”

The code drawing had disappeared. Written in its place was a name and a year:

**HEDY LAMARR. 1941.**



## CHAPTER 2

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### 1941, HOLLYWOOD, CA.

**T**he mini-tornado blew away as suddenly as it had blown in. Asha and Baz looked around. The school building and schoolyard had disappeared. The air was warm and the sun was bright. They were standing in a small sandy spot next to a big driveway. A huge entrance gate stood in front of them. And through the gate, Asha and Baz could see rows of buildings.

“This doesn’t look modern,” said Asha. “In fact, everything looks like the black-and-white movies my grandparents watch.”

Baz pointed to the sign above the huge entrance gate. “Film Studios,” he read.

“Why would the magic stick send us to a film studio? Movies aren’t video games. We need to code a video game!” he said.

“The magic stick sent us here for a reason,” Asha said. She put the magic stick in her pocket for safekeeping. She looked down at the writing in the sand. “Hedy Lamarr. 1941. We need to find someone named Hedy Lamarr.”





# APPENDIX

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## **What Was World War II?**

World War II was a real event and remains the largest war in history. During the war, France, Great Britain, the United States, Canada, the Soviet Union, and China fought against Germany, Italy, and Japan.

The war started on September 1, 1939, and ended September 2, 1945.

## **Was Hedy Lamarr a Real Person?**

Yes, Hedy Lamarr was a real person, though her interaction with Asha and Baz is fictional. Here are a few facts about her life:

- Hedwig Eva Maria Kiesler (Hedy Lamarr) was born in Vienna, Austria, on November 9, 1914.
- She moved to the United States of America in the 1930s to be a film actress.
- Hedy starred in 30 movies and had a film career that lasted 28 years.

- She was married six times and had three children.
- Hedy was one of the sources of inspiration for DC Comics' character Catwoman.
- Hedy invented a tablet that created a fizzy cola drink when dissolved in water.
- Hedy really did promote war bonds during WWII. She traveled to 16 cities in 10 days and sold \$25 million in war bonds. In one war bond promotion, Hedy agreed to kiss anyone who purchased \$25,000 worth of war bonds. In another promotion, she sold \$7 million in war bonds in one night!
- She became a US citizen in 1953.
- She received a star on Hollywood Walk of Fame on February 8, 1960.
- In 1997, Hedy Lamarr won the Electronic Frontier Foundation Pioneer Award for her work in the field of spread-spectrum technology. She also became the first female to receive the BULBIE Gnass Spirit of Achievement Award.
- Hedy Lamarr died at the age of 85 in Orlando, Florida, on January 19, 2000.

## **Was George Antheil a Real Person?**

Yes, George Antheil was a real person. Here are some facts about him:

- George Johann Carl Antheil was born on July 8, 1900, in Trenton, New Jersey.
- He studied and played piano.
- George died at the age of 59 in New York City on February 12, 1959.

## **What Happened with Hedy and George's Invention?**

The secret communication system went unused for many years. The US Navy didn't end up using the technology from Hedy and George's invention until the 1960s.

According to *Smithsonian* magazine, Hedy and George's frequency hopping invention is worth around 30 billion dollars.

Hedy Lamarr and George Antheil never made any money from their invention.

## **How Do I Become An Inventor?**

- Decide the purpose of your invention.
- Research how it would work.
- Plan how to create your invention and gather materials.

Coming Next!

# ASHA and BAZ Meet Elizebeth Friedman

(Book 3)

By

Caroline Fernandez



*Asha and Baz must crack the code  
for the Codebreaker Challenge!*

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