

**PROFESSOR EINSTEIN:** JOWO, we're about to start. Ha, I just love birthday surprises. Say, JOWO, do you think Ms. Schlau will like the cake I made?

Oh, hello, dear students. Today is Ms. Schlau's birthday, and we are going to celebrate by showing you how internet games are made. Ms. Schlau has been looking forward to this lecture. But where could she be? She should have been here 10 minutes ago. How can you be late to your own birthday surprise? Mhm, the cake smells so delicious. I could maybe, just, test a small piece. JOWO, let's start the film now. I can't keep the students waiting forever. When Ms. Schlau arrives, we can just show the film again. In the meantime, I can try just a teensy weensy piece of my cake. Start the film!

In this editorial **office (BÜRO)** for "Die Maus", a famous children's program on German television, nobody is working today. Well, that's not entirely true. But it's an unusual day. Lilly, Hanna and Friedrich are there to **play (SPIELEN)** games as part of a test group. On the website for "Die Maus" there are a number of games. These three are there to see if they work properly. And also if they're fun. But just how do the Mouse and the other characters from the show get made into these Internet games?

This is Hilla. She **works (ARBEITEN)** in the editorial office for "Die Maus". She doesn't know how "Die Maus" becomes an online game. But she knows who does know. When Hilla decides that the webpage for "Die Maus" needs a new game, she **calls (TELEFONIEREN)** Matthias. Matthias works in an animation studio. Instead of catching cookies with his Santa boot, Hilla thinks the Mouse could catch something else. Matthias needs to think of something.

He has a meeting with his colleagues in the animation studio to collect ideas. At this meeting, everyone **sits (SITZEN)** around a big table and thinks about what the new Mouse game could look like. Everyone can make suggestions about what the Mouse should catch. "Umm, maybe, some pancakes". No, the others don't want pancakes. "I have an idea: flies!" Flies aren't quite the right idea either. "How about flowers?" Flowers? Yes, everyone likes that idea.

Now, it's Felix's turn. Felix is an animation artist and he makes a quick drawing of how the Mouse might look when catching flowers. We'll fast forward because otherwise it would take too long, although he actually made the sketch very quickly. Very nice! Felix is finished and Matthias takes the Mouse sketch to a scanner.

**PROFESSOR EINSTEIN:** Using the scanner, he can transfer the sketch into the computer. Then he sends the picture over the Internet to Hilla at the TV station so that she can decide if she likes the **idea (IDEE)**. Hilla likes the idea of catching flowers, so she asks Matthias to make a game out of this. Alright, time to get started.

First, Felix uses the original sketch to make a detailed and precise drawing. He draws each piece individually - for example, here the basket, but also the legs and arms of the Mouse. When everything is complete, Carola then scans each piece into the computer. This is, for example, a piece from a leg, and another leg, and another leg. At the computer, Carola puts the pieces back together and colors them in. Clicking on the color and then on the Mouse. She can also make the sky blue. Just how Carola envisioned it. Very nice.

But the Mouse shouldn't only look nice, it also needs to move. Felix does that with his computer. For the Mouse to move, Felix needs to move the leg bit by bit. He saves each change. Then the **computer (COMPUTER)** knows to move the same leg, but just a little further ahead each time. And very often, one after another. This is a lot of work, which is why Felix is happy that he has his computer so he doesn't have to **draw (ZEICHNEN)** everything by hand. In the end, when he plays the individual images of the Mouse's legs one after the other, it looks like real movement. The Mouse can walk. Great, Felix!

But is this the whole game? Ah, I see - his colleague does that. Hubi receives all of Felix's work on his computer. Hubi can **program (PROGRAMMIEREN)**. That means he can tell the computer in a special language what it should do. Using this computer language, he writes what the mouse or the **flower (BLUME)** should do at a certain point in the game. Let's look at what he's writing ... "`_root.spielmaterial_mc.attachMovie`". Phfft, What does that mean? The computer understands that? Hm. Okay! The computer understood it and lets the flowers fall down one after another. Hubi just programmed that. So he's responsible for making sure that the game works. The Mouse walking by with its basket, the flowers falling down and the player getting points. Everything that happens in the game Hubi has to write for the computer. It takes a long time. And Kai, Hubi's dog, sometimes has to wait a long time before it can go outside.

**PROFESSOR EINSTEIN:** Hubi also has to also think about all the things a player should learn and do in a game. For example, Lilly should learn how to respond quickly by jumping with the Mouse to get as many packages as possible. Friedrich, on the other hand, needs to cleverly avoid obstacles while Captain Bluebear navigates his boat through the water. So she can clear all the fields on the board, Hannah needs to keep track of all the fields while she's clicking on the boat. In the tickling game, the rat Hein Blöd needs to laugh as loud as he can for you get a lot of points. In this Memory game with presents, Hannah has to listen closely in order to win. Everything that Friedrich, Hannah and Lilly are able to do in these computer games was written by Hubi in his program. Phew, finished. The Mouse can now catch flowers. And Kai can finally go for a walk.

The new Mouse game still needs sound effects. This is Marco's job. He watches the game a few times and thinks about how it should sound when, for example, a flower falls into a basket. Of course, he has the sounds and noises on his computer - where else? He has over 10,000 different sounds. But how should it sound when the flower lands in the basket? Uhhh, no, not that one. Another sound. Aha! That sounds good.

When everything is finished and Hilla from the editorial team for "Die Maus" thinks the game is good, and of course the test players - like Lilly, Hannah and Friedrich - think so, too, the new Mouse game is loaded onto the big computer at the TV station and then finds itself on the website for "Die Maus". Now anyone can try out the new game and catch flowers with the Mouse. Have fun!

Mhm, excellent film, yumyum... and excellent cake, too... yumyum...  
Oh, here she comes.

Happy Birthday to you,

Happy Birthday to you,

Happy Birthday, Ms. Schlau,

Happy Birthday to you!

Haha! Happy Birthday, Ms. Schlau.

- MS. SCHLAU:** Oh, Professor, that's so nice of you! Thank you very much.
- PROFESSOR EINSTEIN:** And here is your birthday cake.
- MS. SCHLAU:** Oh, thank you. Um, isn't a piece missing? Or actually all of it?
- PROFESSOR EINSTEIN:** What? No! That is the shape of a delicious, uniquely wonderful-tasting, home-made Nobel Prize-winning nut cake.
- MS. SCHLAU:** Nuts? Oh... I'm sorry. I'm allergic to nuts.
- PROFESSOR EINSTEIN:** Oh? Allergic?
- MS. SCHLAU:** But please, help yourself.
- PROFESSOR EINSTEIN:** Oh, I must confess that I've already tried a crumb or two. And, umm, the idea of eating another piece.... I think my stomach is rebelling. I'm...not...feeling...well. Where's the bathroom?