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This example creates a Full HD window, initializes a black image, and allows the user to draw the first character of their name with mouse clicks. The image is then animated to move within the window, changing direction when it reaches the end.

```
#include <opencv2/opencv.hpp>
#include <iostream>
```

```
// Constants
```

```
const cv::Size WINDOW_SIZE(1920, 1080);
const cv::Size IMAGE_SIZE(300, 200);
```

```
// Initialize black background image
```

```
cv::Mat image = cv::Mat::zeros(IMAGE_SIZE, CV_8UC1);
```

```
// Flag to keep track of animation direction
```

```
bool moving_right = true;
```

```
// Callback function for mouse events
```

```
void draw_character(int event, int x, int y, int flags, void*  
userdata) {
```

```
if (event == cv::EVENT_LBUTTONDOWN {
```

```
cv::putText(image, "YourName", cv::Point(x, y),  
cv::FONT_HERSHEY_SIMPLEX, 1, 255, 2);  
cv::imshow("Animation", image);  
}  
}
```

```
int main() {
```

Initialize window

```
cv::namedWindow("Animation", cv::WINDOW_NORMAL);  
cv::resizeWindow("Animation", WINDOW_SIZE.width,  
WINDOW_SIZE.height);
```

Set mouse callback

```
cv::setMouseCallback("Animation", draw_character);
```

Animation loop

```
while (true) {  
cv::imshow("Animation", image);
```

Perform translation for animation

```
if (moving_right) {  
cv::Mat temp = image.clone();  
cv::Mat right_part = temp.colRange(temp.cols - 5,  
temp.cols);  
right_part.copyTo(image.colRange(0, 5));
```

```
if (right_ptr(0)[0]) // Change direction if reaching  
the end
```

```
moving_right = false;
```

```
else {
```

```
cv::Mat temp = image.clone();
```

```
cv::Mat left_part = temp.colRange(0, 5);
```

```
left_part.copyTo(image.colRange(temp.cols - 5,  
temp.cols));
```

```
if (left_ptr(0)[4]) // Change direction if reaching  
the end
```

```
moving_right = true;
```

```
}
```

Break the loop if 'q' is pressed

```
char key = cv::waitKey(30);
```

```
if (key == 'q')
```

```
break;
```

```
}
```

Release resources

```
cv::destroyAllWindows();
```

```
return 0;
```

```
}
```

`opencv.hpp="">` This script creates a window, initializes a black background image, and allows the user to draw the first character of their name using mouse clicks. The animation involves continuously translating the image horizontally and changing direction when it reaches the window's end. The animation continues until the user presses the 'g' key.