If you are an old comrade to Programming (Specifically C and C++) you must have heard the term “Pointer” before, but if not, in this module you will be learning about it.

So, what is Pointer?

You have learnt about variable in your earlier module, inheriting the same learning, Pointer is a variable too.

But then, why we are learning it separately not along with the variable? Is it different from the variable we created earlier?

Answer to all those questions is yes. Pointer is a variable but instead of storing the actual value, it stores address in the memory block where the value is getting stored.

Let us Understand the concept with an example:

Assume we have a variable called b. This variable b stores some string value let us say “Hello World”.

But where exactly this “Hello world” will be stored in the memory block? So, to depict that we will make use of another variable whose whole purpose will be to locate the address in the memory for this “Hello World”.

So, what is happening here, we are creating a special variable which is storing, or you may call pointing to the memory address of another variable. And this special variable which we created is called Pointer.

![Diagram

Description automatically generated](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAeAB4AAD/4RD4RXhpZgAATU0AKgAAAAgABAE7AAIAAAAPAAAISodpAAQAAAABAAAIWpydAAEAAAAeAAAQ0uocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAE1vaGl0IEJoYXJkd2FqAAAABZADAAIAAAAUAAAQqJAEAAIAAAAUAAAQvJKRAAIAAAADOTAAAJKSAAIAAAADOTAAAOocAAcAAAgMAAAInAAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADIwMjE6MDg6MzAgMDg6NDg6MzEAMjAyMTowODozMCAwODo0ODozMQAAAE0AbwBoAGkAdAAgAEIAaABhAHIAZAB3AGEAagAAAP/hCyFodHRwOi8vbnMuYWRvYmUuY29tL3hhcC8xLjAvADw/eHBhY2tldCBiZWdpbj0n77u/JyBpZD0nVzVNME1wQ2VoaUh6cmVTek5UY3prYzlkJz8+DQo8eDp4bXBtZXRhIHhtbG5zOng9ImFkb2JlOm5zOm1ldGEvIj48cmRmOlJERiB4bWxuczpyZGY9Imh0dHA6Ly93d3cudzMub3JnLzE5OTkvMDIvMjItcmRmLXN5bnRheC1ucyMiPjxyZGY6RGVzY3JpcHRpb24gcmRmOmFib3V0PSJ1dWlkOmZhZjViZGQ1LWJhM2QtMTFkYS1hZDMxLWQzM2Q3NTE4MmYxYiIgeG1sbnM6ZGM9Imh0dHA6Ly9wdXJsLm9yZy9kYy9lbGVtZW50cy8xLjEvIi8+PHJkZjpEZXNjcmlwdGlvbiByZGY6YWJvdXQ9InV1aWQ6ZmFmNWJkZDUtYmEzZC0xMWRhLWFkMzEtZDMzZDc1MTgyZjFiIiB4bWxuczp4bXA9Imh0dHA6Ly9ucy5hZG9iZS5jb20veGFwLzEuMC8iPjx4bXA6Q3JlYXRlRGF0ZT4yMDIxLTA4LTMwVDA4OjQ4OjMxLjkwMzwveG1wOkNyZWF0ZURhdGU+PC9yZGY6RGVzY3JpcHRpb24+PHJkZjpEZXNjcmlwdGlvbiByZGY6YWJvdXQ9InV1aWQ6ZmFmNWJkZDUtYmEzZC0xMWRhLWFkMzEtZDMzZDc1MTgyZjFiIiB4bWxuczpkYz0iaHR0cDovL3B1cmwub3JnL2RjL2VsZW1lbnRzLzEuMS8iPjxkYzpjcmVhdG9yPjxyZGY6U2VxIHhtbG5zOnJkZj0iaHR0cDovL3d3dy53My5vcmcvMTk5OS8wMi8yMi1yZGYtc3ludGF4LW5zIyI+PHJkZjpsaT5Nb2hpdCBCaGFyZHdhajwvcmRmOmxpPjwvcmRmOlNlcT4NCgkJCTwvZGM6Y3JlYXRvcj48L3JkZjpEZXNjcmlwdGlvbj48L3JkZjpSREY+PC94OnhtcG1ldGE+DQogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgIAogICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgCiAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAgICAKICAgICAgICAgICAgICAgICAgICAgICAgICAgIDw/eHBhY2tldCBlbmQ9J3cnPz7/2wBDAAcFBQYFBAcGBQYIBwcIChELCgkJChUPEAwRGBUaGRgVGBcbHichGx0lHRcYIi4iJSgpKywrGiAvMy8qMicqKyr/2wBDAQcICAoJChQLCxQqHBgcKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKioqKir/wAARCAHKA/sDASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJBUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqOkpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn6Onq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwD6RooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiivDviV4d07xV+0N4b0nWoPtFpJo7s0ZJHIkfnigD3GivD/CKQ+BPjvfeFPD2oTS+Hf7LFzdW0sxkjsZt3QEk7flwcf7XsK2E+NGqapFcaj4V8CX2r6HCzAX32tYXmVTgskRUkjg4yQT9eKAPVJ54baFprmVIYl+88jBVHbqakryvx14z8M+J/gBd+J5NNk1jSH8lmsnnNu+7z0TBZc7SrHPGQcehzWt4u+Itr8P4vDlt/ZV1qMOqeZFH5D/AL1CiAoApHzFiQvUY60Ad9RXnPh74q3N94zt/DfijwxceH7u+iaWwd7pZ0uAoyRkAbWxk456demeQTx747g+Nms2sXhqa6jW0iUaWdXAjjXccTL8hGWHUAZ9zQB7rRXA+JPibNp/iI6B4X8PT+INWhiSa7iFwtvHaq4yoZyD8xHIUDpzVvwh8RI/E8Or293pVxpOsaNj7bp07himVLKVccMpA4OP6UAdnRXl/gr4v3/ji4sJNM8H3K6bN8l3fNdrtgfBJCKVBkAOAW+XnOAcV1nj7xXL4J8G3fiCLTW1JLRkMsCy+WQhYKWB2npnOP1FAHSUVyHjD4hWnhfwHD4ktbb+0vtjwx2Vssvlm4eUjaA2Dj5cnoelUtf8f67Y6gLLw94IvNYkWJZJJZLpbaH5hnajEEuR34AoA7yiuK8OfEq08SeBNV8QQafNb3GkrOt3p87ANHLEu5k3AfTnHfp2rO8E/FO/8b3VlLZeErmDSLiIGXUJLpf3cu3LKE2gsob5d/GeuMUAehQ3ENyhe3ljlUMVLRsGAI6jjvUleW/DnW9H0zwDrepeH/D15DFbahcBtOtZTcSSyB9u5S2OvBweAPpT7f4u6laa9pln4u8GXOh2Wq3AtrS9+2pOPNb7quqqNufYn9DQB3kviPSofE0Ph6W7C6rPbG6jtyjfNEG2lt2NvXtnPtWnXinxB11/D/7Qmg3tvp1xqc7aG8cNrb4DSMZWxljwo4JJPSut8JfE6TW/FUvhnxJoE/h3WVh+0QwSTieO4izjcrhRyPTHr6GgDq9J8R6Vrl1qFtpd2J5tNuWtbtNjKYpR1X5gM9eoyPetOvIvhtqFrpPiT4najqMywWlrrM800jdERRkn8hUknxp1SPTjrreAtQ/4RsASG/8AtaecIv8AnoYccDv97pzQB6zWffa7pum6nYade3SxXeos62sO0lpCq7mPA4AHc4HIHUirFhfW+p6fb31lIJbe4jWWJx/EpGQfyrzfxH4F8S6p8Qdd1y0urdRLopstHkZ2zaykckjGBlucjJ6fSgD0DSNd03XoZ5tIuluooJ3t3dVIXehwwBI+YA8ZGR71oV5zpAvPhd8MdHsLfQLjV9RCrA8FiQEMu0lnZ2wFUkH5iOrDjmpfC/xOutU8X/8ACM+KPDc3h7U5bc3NsDci4jnQHBwwVcEemOx9sgHQXnjzw1p95rNreaosc2hwpPqKeU58hHXcp4X5sjsuTyK2NO1C11bTbfUNOmE9rdRLLDIoIDowyDzz0NeS6n8LNe1a18Qz3c9suoeJNRQX8iOx8uxQ/LFGdvJ2qi5IHVj2APq+k6dDpGk21hbKEit4wiqOgAGMUAXKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigArw74k+HbHxT+0P4c0vVUke2k0d2YRyNGQRI+DlSDXuNRvBFJKkjxqzp91iORQBxlr8MND0Dwpq+m+GrKO2nv7OWHzWySWZCoLMeT171wXw5+KXhzwT8PYdA8TrdWGvaYrQSaYbR2lnYEhdmBht3rn9Oa90qtNp1nPJ5k1tG7/3mXmgD5yutD1HRf2RteGqwNbz3dzFc+Qw5jD3UZAPvjFdt8QQG8Y/C0MMg3c+Qf8ArkteutDG0PlMimPGNuOKa1tC6IrxKVjOUBH3T7UAeX/EgAfGr4Y44/eaj/6JSs3VvEWneC/2jb6/8SyyWVnqOkwx2s5hd1ldWIKjaCd3t/iM+ySQRTFTKisUOVyOhplxaW91j7TCkm3puGcUAfOni7QvDWmfG3Xb74jreQaPq8cM+n6lC0yxBlQKyMYz1z6+g6ZruPh1pfgOGHXr7wELyTdb+XNc3Am2TYVsbDLy2PUccivU5bS3njEc0KOg6BhnFEFpb2ylbeFIweu0YoA86/Z/QL8HNIIXBIfJx1+dq7/V9Mt9a0W90u+Tfb3kDwSr6qykH+dWYoY4FKwoqAnJAHen0AfMfgddV8SeK/D3gPV428rwTcXD3TEfLK6tsh/Jcke1b/jbxZep8UdV0XxL4s1PwnpVrFEdMXToCGuwUBY71Rix3cY/DrmveBawLcG4WJBMRgvjk02eytrog3ECSFehZc4oA8F+Fe7/AIVh8Sy0l3Luur9xJejE7gwAhpB/fIOT7k16P8F0C/CDw+QME2iE8deK7WK1gh3eVEibhhtoxmnRQxwRiOFFRB0VRxQB8/eG9Z1zw/8AA3xXqXhiMvqEWrz7WEXmmNDPh3C98KSfTuelcprOqWmr3vhKWx8a674mk/tyzkuI7pGFrbEtjuigPk4AGeN1fVaW8Kb9kajzDlsD71QrpdimdtrEM8n5etAHjnj3X7Xwz+0B4f1TUoJ5bKHQmFw8ERkMKGYjzCo5Kg4zj1otdbtfiJ8ftI1jwsJLjSdGsHjk1Dy2RJZHJ+RdwBIAP559s+0SW0ExUyxK5UYGRnFNgsra1JNvAkZPXauM0AeGaZo134g034x6Xpw3XVzqVwsK/wB9gAQv44x+Ncn4fs/hC3he3g8T/wBrWmtxxCO70s/bDKZBwQEBwQT9B64r6jSCJJXkRFDv95gOTUEmm2UsvmSWsTP/AHitAFbw3ZWeneGrC00tHjs4YESBJM7kQAAKc88DitOkVQqhVAAHQCloA8w+NniXWfDum6L/AGbezaXpt3dmPUtTgg817ZMfLjg7cnPOM8fgfPPCVza3fx10CbTvEmseJLb7HOq32pBtu7glYyyqSBkZ4xk9a+j5YY54ykyK6HqGGRUMWn2kJUxW0aFTkYXpQBZrnY/G2lyfEKbwaEuRqUNmLxpCg8oqSBtDZzu5BxjGO9dFXI+HPBH9k+Ltb8RahdC9v9Tn3LJs2+VEBhIwMnhQOueTk8dAAddRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUVxPxk/5I34m/68m/mKAO2org/AnjLw/H8P9ES88RaYk6WMSust7GGUhBwQWzmuR+A2vWmgfAN9W1m4MVlYyzySOQTtG8nAHcknp3JoA9qrM1jxFpWgzWEWrXYt31G5FragozeZKQSFyAcdDycCvNm+NmrwaaNdvfh/qEPh3h2vVvEaZIz0cw44/wC+uKX4s6hbarD8PNQsJRNbXWvW8sUg6MrRsQfyNAHrdZdv4l0i68TXfh+C8VtVs4kmnt9jAojfdO4jB+gNcp4q+JsmieJovDPhzQJvEGsfZxcTxLcLBHAh6bnIPzHrjHSuL+HutyeIf2ifEd/cabc6XO2nQJLaXWN8TqqgjI4I4yCOoINAHt8NxDcBjbyxyhGKMUYNtYdQcd/apK8l8H+JNG8PeBvG2uaFoTWqaXqN5JPaG7ZxcSR9XDlfl3YHGDjHeopvjtcw6RFr/wDwhGo/8I2dnnag1ygdAxA3CLGWXJwCSM9cUAev0VxvjL4i2vhfTdKksLGXWb3WpNmn2kEgTzvl3Fi54VQCOcHqOK57w/8AFrX9U+IEfhXVvAx0qfyvPlkOqCUrEcgOq+WNw3YHB4z7UAep0VW1G7/s/S7q82eZ9nheXZnG7apOM9uleRxfHy9uvDcfiGx8CX0+kRRq99c/a1XyT/F5alcyKvTcdooA9loryS7+OpgtF1y38I6hN4U8xUk1d5lR1UnbvEGCSuTwSRn0rr/F/wAQLLwtpunyQWs2q3+qsU06xtyFa4IG4nceFUAgknpkUAdZRXnvh/4n3d14qtPD3i3wxceHb7UI3exY3S3EVxsGWUMFXDAc4x/TNPUvi/eReMNY8MaJ4SudW1LTZVUbLpY4nQorbmcr8hy2AoDZwTxQB6dRXkdj8crvXLV4fDngjUL7WLRnW/spLlYUtWUkbfNIO5jjoF+uK67w78SNG174fy+LJPMsLS1SQ3kc4y9uyZ3KcdTxxjrkd+KAOuoryI/G3VxpZ14/D7UP+EcA8w3ovEMwi6+Z5OOmOfvfpzXR+L/inpvhfwhoniW3tpNT07VruKBDC211SSN3DBcHcfkxt45PUYoA7qivL774uato3hyPXNf8FzafYm/ht5Ga/VzHBJ/y2OExkHAKZ6kfNXR+NvHkXhG10ZoLI6jc6xfR2kECy+Xwwy0mdp4UY7dxQB1tFIrbkDYxkZwa8q1P4xa3plrNqs3w81NNCgOZbqa6RJ0TOCxgwcfQsD64oA9WrL1jxLpGgXOn2+r3gtpdSuBbWilGbzJCM7eAcfU4FYfir4kaV4a8J2GtxxTaidUeOPT7WDAe5dxlRz0GOST0ryfx34w1bxD4p8DWmv8Aha50C5j1hJo91wtxFKhwOJAB8wPUY7igD6IrLj8S6RL4om8OR3gOrQW63Mltsb5YycA7sbTz2zmuW8XfEtvD/iK18N6BoU2v63Lbi5e3S4WBIYs4BZyDgnsMfzFcP4K16bxD+0lqd5eaVc6Tcro8cU1nc4LRurLnDDhlPUHuKAPdaK8stvjHf6p4j1HRtC8HXGoTaZqctndyC8VI0jSQoJASvLHBOwdB/FV7WfileL4hutH8HeFp/EU9gQt7L9rW2jhcjPlhip3MOM4GBnrQB6LRXB6b8WNJu/Aur+I76zurB9EZ4tQsJQDLFKuBsHY5JAB4HPak8JfELWdf1SC31jwZd6Ra3cZktrwXa3CN3w+0DYSOnX0oA72ivMJ/jBfT6zqUXhvwZe61pel3TWt1ew3KK+9Pv+XCRl8H3Ge1emxSCWJZE6MMjNADqK851z4q3MXim80Dwd4Yn8R3Wn4F7ILpbaKFz/AGKtub1wOKs6B8TJPE2gau+leH518Q6Q4judEup1iYMTxiTBG0jJBxzjp0NAGtbfEfwleeLW8M2usxS6srtGYEjcrvUEsvmbdm4AHjOeDXT14N+z1e6hNp8kN14bH2Sa6uJm1U3QZvN3/dKbc+o3Z7dOa9O8eeNx4FtdLvbnTzdWN5fx2dzOs2z7KHziQjadw49RQB1dFcn4z8dx+E7jQbaKyOoXWt3q20UQl8vZHjLy5wchQRx3z1rH174keIbDUryHRPAF/qdrZMRLcy3SW+/HUxoQxceh4z2oA9EpGYKpZiAAMkk9K4W5+Kdgfg9L4/0qze7t44RJ9kkk8pt3mCNlLYbGDnnBziq+l+PLnxfperPdeE7m38PyWErwXc9yA12m05UxgZj3Lkg5PHpQB6BDNFcQrLbyJLG4yrowYMPYin15n4O8TWei/BfSdT8OeG76aGUBLfS7aXzWjLEnBkbGFBzlj61NoPxTvbnxhZ+HPFvhafw9d6jG8ljJ9rW4jn2DLLkKu0gc9/1FAHZ23iPSrzxFfaFb3YfU7COOS5t9jDYrjKnJGDkehOO9adeFXniW78O/tF+Kf7L0S41q+ubK0WK3ikESjEYyzyHhRyOxJz0r0HwL8RY/F99qOk6jpU+ia5pjL9q0+eQSYVuVZXAAYH6Dt6igDodA8R6V4o0sajoV2Lu1Mjx+YEZPmVirDDAHqD2rTrxX4Q+JNP8JfBPUNb1h2S1tb64LBFyzkykKqjuSSAPrWt/wALi1PTntrvxR4HvNI0W5mSJdQF4kxi3nCmSMKNo57E4+tAHqlZs/iHSrbXBo897HHfm1a7MRz8sKnBdmxhRn1Izg46HGirB1DKcgjINeMeIfhl4t1Q+PJ7e8tRfa9LHHZTtI/yWqkAxH5fl+TIwAQcnnvQB6Ovjvw22n6RfDUh9m1qcW9hIYZB5znOBjblc4PLYHvyK6GvFPi6tt4U0HwDi2kEFhrUJ8i3TcxCxt8qjueMAVvaf8XLuLxNpuleLPCd1oFvqz+VYXj3Szq8h6I4UDYTx3PJ+poA7O78YaDY69caNd6gsWoW1i2oywmN/ltwcF92Mde2c+1W9D1zTvEmjW+raJci6srld0UoVl3DOOjAEdO4rzfX/h34h1jVvFesJPapqOqQrp1k+5itvZcBsfLkuVLtjpuIGcDNd/4V8P23hfwzZ6RZLtitowgGc0AbFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFcT8Zf8Akjfib/ryP8xXbUjosiFXAZWGCD3oA8v8EfDHwZqHgPR7u98N6bLcTWUTyO9qhLMUGSeOteeeDdAv/En7Iur6XpURlu5JWkjiA5fy51kKj3IQge9fSUcSQxiOJQiDooHApsUEUAYQxqgY5bA6mgDxDVfi14a1X4Q3fh/TFuZfEF7pr2I0hLSQSxyumw7uMALnOc9qr+INHudB8DfCvTL3/X22s26OB2PltmvcTplkZvNNrF5mc7tvNTyQRTKFlRXUHIBHSgDxS71iy+Hn7Qet6z4seS10rXLG3a1vfJd41eOMIUJUHDfKT+XrTfAOuQeJP2ivEer2VvcQWlxp0HkG5iMbSIAF37TyASpIzziva57WC5QLcRJIo6Bhmkjs7aFg0UKIyjAIXGBQB4Hov/JGfin/ANf2pfzrpNdRR+yncYAGdEjJ49lr1pbeFd+2NR5n3+PvfWhYIlh8lY1EeMbccYoA+ffiRd/YdB+GV1JdtpMcIdl1ZIDO1vJ5SbU8sZ3BucjB+7W58LrrRNb8fXOtXvjaPxD4jktRAiNaNaFIVOdqRMo4zyevrXQ/ETwLrWqeItD8ReE309rrSY5IhY6gjGGRXxkgryp47e345ukeB/Fus/ELSfE3i6PSdPGjpIttbaUjYYuu1i7vyeM4HQfnkA9J8R/8irqv/XlN/wCgGvIdCUf8MhXpA5OjTZ49jXuBGRg1GlvDHEY441VD1UDg0AeJ60gH7HQwuD/ZFqTx7xVj/EbQkuNF+Heu6vaXV3oVjbtBqItQ++FZEXa/yHdgEc49AO9fQi20K2/kLGoixjZjigQRCAQiNfLAxsxxigDw/wAGaV8JLzxppsnhGe/1DUYS0sUw+0vHB8p+80nygnpjr0rf8AqD8b/iISASLi2wfT9yK9Mh06zt5N8FtGjeqrUwgiWYyhFEjDBbHJoA8j+CqD/hLviKSvI8SXWDj/bNcn4U0O98Q/A74gaVpkZku5tTuTFH3cq6ttHuduPrX0OkEUcjyRxqrv8AeYDk0RwRRM7RRqpc5YgdTQB4gfi54al+EMuhW6XTeIptOax/sZbSTzVnZCmD8uNoJznPT34rP8Q6JdaD8H/hppmorieHxJYiReuCVkJH617y2m2Tzea1rEZM53Feankgimj2SxqyjsRxQBi+KvDkHirwPqOgzhVS9tTErEfcbGVb8GAP4V4f8LbjU/H3jfRl1yGRF8GWDWciyc5uixVm9zsRQfevouTesLeSqlwp2BjgE9smuD+FHgvUfCWj30niCSGbWNRvJbq7mhJKu7tnIJAOMY60AdvfSTQ6fcSWkYlnSJmijPRmA4H4mvlLVfFNx4j8C6tJ4g8a6+fEDwyifw/bW5iijwCSroEwEAHJLZx719aVWbTbNpjK1tEZD1bbzQB4V4qt7i1+H/wz8S/Z5biw0WSJ74QoXaON41HmYHYbf1FR/ELx5onjTxV4GTwy097bWusRmW9FuyQhm6RgsAWbAJOBgV78LeJYfJEaiPGNuOKhTTLKNcJaxKM54XvQB49rGqWngD9oK71/xSZLbRtY02JIL7ymeOOVAFKNtBweM/iKg8Ha/beJ/wBpTU9V06C5is5dHRYHuITEZlDgbwp5Ckg4yASBnFe2z20Fymy4iWRfRhmmx2VtCytFAiFRhSF6UAeYfBdB/bXxAYrz/wAJVe4OP9oV5zceH/B+hfE7xZD8Uvttgt9qEl7p98jTrDNHIxbbmM4yM45r6ZSCKOR3jRVZ/vEDrTLizt7oAXMKS46bhmgDyXw1bfDvSfh34ivtF07UrzQp5PKvke3ld7hTtUyKsh3FQGyT1G1iBkVz/gbXbfTviVpGj/DjxFqGu+F5o5fttpdRyNHp+F/dhHkUFcnjb9c9ePe4rWCGIxxQoiHqoHBpkOn2lvIZILeNHP8AEq80AfPHjTXfDem6tqur+AdZ1jQfGL3JE2jLaybb2Xfgl4ipQg8ndnvnqa+gdFubi80OzuL2MRXEkKtKg6K2OQPxqWTT7OabzZbaNn/vFeasgADAGBQB4Z4Y8TaX8LfiH4zsvHLvpiapqkuo2N68DvHPHId20MoPI9PXNanww87xB8VvF/jS3tp7fStS8mG08+Mo0qxxhN+08gHGRn1r1m4s7a6x9phSXHTcM06GCK3j2QRrGvooxQB5f+z1x8N5c/8AQQuP/RjV2PxB8MJ4x8AavobBTJdW58kt0WVfmQ/99AV0EUEUO7ykVNx3NgdT60+gD56+FOoX/wASfHOm6pq8Uix+F9MSxCyD71ySfMf64ABH0qrqXjC+1Dxb4gtPF3jLXfD11Z3skVjpGkW5RpoQcRlcId5Ydycd+BX0VFawQSPJDEiO5yzKME0yWwtJ5RJNbxu46My80AfOukI0f7Fupo4KsokBB7H7XXtUSBPhW4UY/wCJS+eP+mRro1tYEieJYkCP95QODT0jSOMRooVAMBR0AoA+eoPEWt+G/wBm/wALXGiTS2cM1xHFf30UHmva253bnC4OOQBnBxn1IrK0y8tL/wCM3giXTfFWteJ4UkuQ91qAbyY2MJO2IlVyePmxkDC19Li1gWEwiJBGeq44NRx6bZRY8u2iXByML0NAHitz4t0zwf8AtH+J73Xlmi0+Szs43vEhaRLd/Lyu/aCQDzzjtV7wDejxh8cdf8X6TDKuim0is7e4eMoLraAS4BAOMjg+n6evy2dvOxaaFHYjaSwzxSwWsFqu23iSMeijFAHzXp+gX/iH9l/U7fS7d7qeDVZLn7PGDulVJiWAx3xk/hT9P0/4J6raWkJbVZ7+ZkRtNH2t5I3J6MpO0AHvnFfSUcEUIYRRqu85bA6mof7MsvN8z7LFvzndtoAmto1ito0jJKqoAJ7ipKOnSigDyP49XbWEfg28W1lvPs+upKYIFy8gWNiQo7nAPFYXjvxfpHxP1bwhoXgxpr2a21aK/vJhbvGLRIwcqxYDDHJ49VHqK92lginAEyK4U5AYZwaiisLSGYyxW8aOerBeaAJ0BCKD1ApaKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAoqtqWoWukaVd6lqEvk2lnC888m0tsRFLMcAEnAB4AzXn/8Aw0H8Mf8AoZv/ACQuf/jdAHpNFU4NWsrjQ49Yhm3WElsLpJtjDMRXcG24z93nGM1wX/DQfwx/6Gb/AMkLn/43QB6TRVO91ey07Q59YvJvLsLe3a5lm2MdsaruLYAyeOcAZrhY/j/8M5pUjj8S5d2CqPsFzyT/ANs6APRqKoa3ren+HNFudW1m4+zWNqu+aXYz7RkDOFBJ5I6CuMsvjt8ONR1C3srPxH5lxcyrDEn2G4G52OAMmPA5PegD0KiszxF4j0rwpoc+sa/dfZLCAqJJvLZ9u5go4UEnkgdK5XSfjb8Pdd1i10vSvEHn3l3IIoYvsVwu9j0GWjAH4mgDvaKx/FHizRfBmj/2p4lvfsVn5ixeb5TyfMc4GEBPY9q5/QPjJ4D8T65baPoeu/ar+6LCGH7HOm7CljyyADgE8mgDuKKwvFnjXw/4H0+G98UX/wBht55fJjfyZJNz4JxhFJ6A1k+G/i54I8X60mk+Hdb+2X0is6xfZJ48hRknLoB096AOzornfFvj3w14FitZPFWpfYEu2ZYT5Eku8rjP3FOOo61T8K/FPwb421WTTfDGsfbruOEztH9lmjwgIUnLoB1YcZzzQB11Fcx4t+I3hXwLNbReKtV+wPdKzQj7PLLuCkA/cU46jrTfCfxK8J+Obq4tvC2q/bpbZBJKv2aWPapOAcuozz6UAdTRXJ+K/ih4P8EalFYeKNX+w3U0Imjj+zTSZQkrnKIR1U8e1WPCPxB8MeO/tn/CKan9v+xbPtH+jyxbN+7b99VznY3TPSgDpKK47xP8WPBXg3WP7L8Sa19ivfLWXyvss0nynODlEI7HvWl4T8ceHfHNncXXhbUPt0NvII5W8iSPaxGcYdQTx6UAb9FcT4h+MPgXwprs+ja/rn2S/t9vmw/ZJ327lDD5lQg8MDwa3PC3i/Q/Gukvqfhm++22aTGFpPJePDgAkYdQejDnHegDaorhNZ+NXw/8P6zc6Vq+v/Z720fy5ovsVw+xvTKxkH8DXTeG/E+keL9FTVvDt39ssZGZFl8p48lTgjDgHr7UAatFef6l8cvh1pGq3em6h4h8m7s5ngnj+xXDbHRirDIjIOCDyDiuw0HXtN8TaHbaxodz9qsLoEwzeWybgGKnhgCOQeooA0KK86uPj58NbW5lt5/Em2WJyjr9guThgcEcR13OmavZazottq2mzedY3UImhl2Mu5CMg4IBHHYigC5RXm3/AA0H8Mf+hm/8kLn/AON13q6tZPoY1hZs2DW32oTbG/1W3duxjP3ecYzQBcorzb/hoP4Y/wDQzf8Akhc//G673UdXstJ0W41bUJvJsbaEzyy7GbagGScAEnjsBmgC5RXnUHx9+GlzcRwQ+JN0kjBEX7BcjJJwB/q67XXdd07w1olzq+t3H2axtVDTS7GfaCQBwoJPJHQUAaFFefWHx0+HOqalbWFj4i826upkhhj+w3C7nYhVGTGAMkjk11viPxLpPhLRJdX8Q3f2SxhZVeXy3kwWIA4UE9SO1AGpRXB6P8a/h/r+sWulaTr/ANovbuQRwxfYrhd7HtlowB+Jro/FPi7RPBekrqfia9+xWbSiESeU8mXIJAwik9FPagDZorifD3xi8CeKtet9G0HXfteoXO7yofsc6btqlz8zIAPlUnk9q7agAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooA5z4iqW+F3ipVBJOjXgAA6/uXo+HSlfhd4VVgQRo1mCCOn7lK3L69t9N0+4vr6VYbW1iaaaVuiIoJZj9ACaLG9t9S0+3vrGVZrW6iWaGVejowBVh9QQaAJ6KKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACuO+E/ifUPGXww0nXtZ8r7bd+d5nkptX5ZnQYH0UV2Nc/wCBvCcHgbwXY+HbS5kuobPzNs0qgM2+Rn5A92x+FAHQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAc98QIJbn4Z+J4LaJ5ppdIu0jjjUszsYWAAA5JJ7UfD+CW2+GfhiC5ieGaLSLRJI5FKsjCFQQQeQQe1a+p6jbaPpN3qWoSeVaWcD3E7hS21EUsxwOTwDwKNM1G21jSbTUtPk820vIEuIHKldyOoZTg8jgjg0AWqKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACuK+D/iLU/Ffwp0fWtduBcX915/myiNU3bZ5EHCgAcKB0rtaxPB/hWx8E+FLPw/pMlxLaWe/y3uWDOd7s5yQAOrHt0oA26KKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAMDx5aXF/wDDnxJZ2ULz3NxpN1FFFGMs7tCwCgdySQKPAdpcWHw58N2d7C8Fzb6TaxSxSDDI6wqCpHYggitPV9Tt9E0S+1W93fZrG3kuZtgy2xFLNgdzgGjSNTt9b0Sx1Wy3fZr63juYd4w2x1DLkdjgigC5RRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRUF5e2unWkl1qFzDa28Yy800gRFHqSeBXCXXx4+G1pdeRL4nhZ84zFbzSL/30qEfrQB6FRWT4f8AFOieKrH7Z4e1O3v4AcM0L5Kn0I6g+xrWoAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigArhfgtrWo+IfhBouqa1dyXl9P5/mzyY3NtnkUZx6AAfhXdVleGPDeneEPDlroeiRvHY2u/yldy5G5y55PXljQBq0UUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQB4zqnxj1qw/aD/AOEGWysG0oSRoZSj+f8ANAJM53bepx93pXsqncoPqK+VvEv/ACeY/wD18Qf+kaV7jrHxj8A+HLz7DqviO3S5j+V44Y5J9h9GMasAfY0AdzRWVoHifRfFOni98P6lb39vnBeF87T6EdQfY1q0AFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBh+N7C51X4f8AiHT7CIzXV3pdzBBGCBvdomVRk8ckjrR4IsLnSvh/4e0+/iMN1aaXbQTxkg7HWJVYZHHBB6Ve1zVodB8PajrFyjyQ6fay3UiR43MsaFiBnjOBRoerQ694e07WLZHjh1C1iuo0kxuVZEDAHHGcGgC9RRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAHBfFL4ar8SbTTLW41Ke0trOdpZYoQP32RgcngEeuD1NZFp+z54Gg077NNpSSEjBkaRy+fXdnNZ/x4+LGqeBlsND8Loo1bUUMn2hkD+Smdo2qeCxOevAx0OeORsPhR8TvEtsl9rXxA1G2mkG7yo5pHVM9hh1A/AYoA5zwfbTfDH9pqXw3ptzI1jJIYHUtnfG8Xmpn1K5HP19a+tFO5QfUV8a6RoN94Y/aWstI1XUpdUu7a4TzLubO6TdbhhnJJ4DAde1fZMX+qX6UAOooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACvP8A4G6lfav8GNCvtVvLi+u5ftHmXFzK0kj4uJAMsxJOAAPoK9ArO0DQNM8MaHb6PoVqLSwtt3lQh2bbuYseWJPVievegDRooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigD46+K+n6hq37Tmp2GjXBtry4kt445g5Upm1jycjnpmvW9A/Zu8JQ6IsWq28l3cuvzzvK6tn2CkAf5zmvPvE7qn7ZbF2Cj7TbjJOOTaIBX1RF/qU+lAHyHo0V98Ff2go9Hhunk0+5mjhJY/62GX7hbtlSevsexr68ifzIlcfxDNfKXxxlj1L9o/SbWzOZYVs4JPLPIcyFvwO11r6o08EWEIPXaKALFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBjeMtNudZ8C69pdgqtdXum3FvCrNgF3iZVBPbkijwbptzo3gXQdLv1Vbqy023t5lVsgOkSqwB78g1Y8Q6uugeGNU1l4TOunWc10Yg20uI0Lbc9s4xmjw9q66/wCGNL1lITAuo2cN0Ii24oJEDbc98ZxmgDRooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDw79oT4Zaz4qk07xF4YUz32noYpLcMAzJu3Ky54yCTx3z7YrCsfjF8Uk0tNJg8AONSVdgu5YZEjz0ztOB/49ivo4jPWovs0O7PlLn1xQB8maH4O8a2vxz0jVfFFteX1xcv9our9YWMSkow2lwNowABjjHAHGK+tov9Uv0pDDGxBKKSOnFPoAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigArzv4CXM938EdAnu5pJ5m+0bpJXLMcXMo5J9q9EqnpOlafomlw6fo1pDZ2UO7yoIF2ouWLHAHqST+NAFyiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAPlP4l/DvXvFn7QusC0tLu1tp0ie31AwP5O5beMD58Y+8Mccj8K0I/iP8avCVm2h3vhs6lPGPLivms5JiR0BLIdrfU4PrmvpkxIzBmUFh3xSPBFIcvGp+ooA+bfhP8LPEWp+Nn8ZeOQ4u2kaZElILs7dXbHAwDgL29sV9KooRAo6AYoVFQYRQB7UtABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAZHi3Sp9d8Fa3pNm0a3F/p9xbRGQkKHeNlGSAcDJ9KPCWlT6F4K0TSbxo2uLDT7e2lMZJUukaqcEgZGR6VJ4m1dtA8J6vrKQidtOsZroRFtocxoW257ZxjNHhnV21/wAJ6RrLwiBtRsYboxBtwQyIG2574zjNAGnRRRQAUUUUAZXij/kUNY/68J//AEW1H/CL6B/0A9N/8BI/8KPFH/Ioax/14T/+i2rVrXmlGCs+r/QiyctTK/4RfQP+gHpv/gJH/hR/wi+gf9APTf8AwEj/AMK1aKXtJ92Pkj2Mr/hF9A/6Aem/+Akf+FH/AAi+gf8AQD03/wABI/8ACtWij2k+7Dkj2Mr/AIRfQP8AoB6b/wCAkf8AhR/wi+gf9APTf/ASP/CtWij2k+7Dkj2Mr/hF9A/6Aem/+Akf+FH/AAi+gf8AQD03/wABI/8ACtWij2k+7Dkj2Mr/AIRfQP8AoB6b/wCAkf8AhR/wi+gf9APTf/ASP/CtWij2k+7Dkj2Mr/hF9A/6Aem/+Akf+FH/AAi+gf8AQD03/wABI/8ACtWij2k+7Dkj2Mr/AIRfQP8AoB6b/wCAkf8AhR/wi+gf9APTf/ASP/CtWij2k+7Dkj2Mr/hF9A/6Aem/+Akf+FH/AAi+gf8AQD03/wABI/8ACtWij2k+7Dkj2Mr/AIRfQP8AoB6b/wCAkf8AhR/wi+gf9APTf/ASP/CtWij2k+7Dkj2Mr/hF9A/6Aem/+Akf+FH/AAi+gf8AQD03/wABI/8ACtWij2k+7Dkj2Mr/AIRfQP8AoB6b/wCAkf8AhR/wi+gf9APTf/ASP/CtWij2k+7Dkj2Mr/hF9A/6Aem/+Akf+FH/AAi+gf8AQD03/wABI/8ACtWij2k+7Dkj2Mr/AIRfQP8AoB6b/wCAkf8AhR/wi+gf9APTf/ASP/CtWij2k+7Dkj2Mr/hF9A/6Aem/+Akf+FH/AAi+gf8AQD03/wABI/8ACtWij2k+7Dkj2MCLS9P03xfZf2dY21p5lhc7/IhVN2JIMZwOep/Ot+sq4/5G/T/+vC6/9GW9atE22ot9v1YopJuwUUUVmWFebfs+f8kJ8Pf9vP8A6Uy16TVPSV0xNLhXQltFsBu8oWYURfeOdu3j72c475oAuUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAGL4gtbe9u9Ft7yCO4he/bdHKgZWxbzEZB46ipf+EX0D/oB6b/AOAkf+FGr/8AIU0L/r/b/wBJp61a2c5RjFJ/1dkKKbd0ZX/CL6B/0A9N/wDASP8Awo/4RfQP+gHpv/gJH/hWrRU+0n3Y+SPYyv8AhF9A/wCgHpv/AICR/wCFH/CL6B/0A9N/8BI/8K1aKPaT7sOSPYyv+EX0D/oB6b/4CR/4Uf8ACL6B/wBAPTf/AAEj/wAK1aKPaT7sOSPYyv8AhF9A/wCgHpv/AICR/wCFH/CL6B/0A9N/8BI/8K1aKPaT7sOSPYyv+EX0D/oB6b/4CR/4Uf8ACL6B/wBAPTf/AAEj/wAK1aKPaT7sOSPYyv8AhF9A/wCgHpv/AICR/wCFH/CL6B/0A9N/8BI/8K1aKPaT7sOSPYyv+EX0D/oB6b/4CR/4Uf8ACL6B/wBAPTf/AAEj/wAK1aKPaT7sOSPYyv8AhF9A/wCgHpv/AICR/wCFH/CL6B/0A9N/8BI/8K1aKPaT7sOSPYyv+EX0D/oB6b/4CR/4Uf8ACL6B/wBAPTf/AAEj/wAK1aKPaT7sOSPYyv8AhF9A/wCgHpv/AICR/wCFH/CL6B/0A9N/8BI/8K1aKPaT7sOSPYyv+EX0D/oB6b/4CR/4Uf8ACL6B/wBAPTf/AAEj/wAK1aKPaT7sOSPYyv8AhF9A/wCgHpv/AICR/wCFH/CL6B/0A9N/8BI/8K1aKPaT7sOSPYyv+EX0D/oB6b/4CR/4Uf8ACL6B/wBAPTf/AAEj/wAK1aKPaT7sOSPYyv8AhF9A/wCgHpv/AICR/wCFH/CL6B/0A9N/8BI/8K1aKPaT7sOSPYw9LsLPTvFWpRafaQWsbWVqxSCMIpO+cZwO/A/Ktysq3/5G/UP+vC1/9GXFatFRtyu+y/IUNEFFFFZlhRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAGV4o0mTX/B+saPDIsUmoWE9qkjjIQyRsoJ9hmjwvpMmgeD9H0eaRZZNPsILV5EGA5jjVSR7HFJ4r1abQfButaxbIkk2n2E91GkmdrNHGzAHHOMijwpq02veDdF1i5RI5tQsILqRI87VaSNWIGecZNAGtRRRQAUUUUAZXij/kUNY/68J//RbVq1leKP8AkUNY/wCvCf8A9FtWrWj+Ber/AEJ+0wooorMoKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAMq4/wCRv0//AK8Lr/0Zb1q1lXH/ACN+n/8AXhdf+jLetWrltH0/Vkx3YUUUVBQV5t+z5/yQnw9/28/+lMtek1T0m/03U9LhvNDuba6sZN3lTWrq0bYYg4K8dQR9QaALlFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBlav8A8hTQv+v9v/SaetWsrV/+QpoX/X+3/pNPWrVy2j6fqyY7sKKKKgoKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAMq3/AORv1D/rwtf/AEZcVq1lW/8AyN+of9eFr/6MuK1a0qb/ACX5Ex2CiiisygooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDN8R6R/wkHhXVdG8/7P/aNlNaeds3+X5iFN23IzjOcZFHhzSP8AhH/CulaN5/2j+zrKG087Zs8zy0CbtuTjOM4yah8YancaJ4H13VbLb9psdOuLmHeMrvSNmXI7jIFHg/U7jW/A+hare7ftN9p1vczbBhd7xqzYHYZJoA2KKKKACiiigDK8Uf8AIoax/wBeE/8A6LatWsrxR/yKGsf9eE//AKLatWtH8C9X+hP2mFFFFZlBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBlXH/I36f/14XX/oy3rVrKuP+Rv0/wD68Lr/ANGW9atXLaPp+rJjuwoooqCgrzn4AwyQfA7w/HPG0br9pyrqQR/pMvY16NVDQ9c03xJo0Gq6JdLeWNxu8qZAQG2sVPUA8FSPwoAv0UUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAGVq/8AyFNC/wCv9v8A0mnrVrK1f/kKaF/1/t/6TT1q1cto+n6smO7CiiioKCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigDKt/8Akb9Q/wCvC1/9GXFatZVv/wAjfqH/AF4Wv/oy4rVrSpv8l+RMdgooorMoKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAz9f0lNf8N6no80rQx6haS2rSKMlBIhUke4zRoGkpoHhvTNHhlaaPT7SK1SRhguI0Cgn3OKqeNNRudH8Ba/qWnyeVd2emXNxA5UNtdImZTg8HkDg0eC9RudY8BaBqWoSebd3mmW1xO4ULud4lZjgcDkngUAbdFFFABRRRQBleKP8AkUNY/wCvCf8A9FtWrWV4o/5FDWP+vCf/ANFtWrWj+Ber/Qn7TCiiisygooooAK5rxz43sfAuixXt5BNd3F1OttZ2duMyXErdFHYDjJJ/ngV0teQ/FzLfFX4ZpJzA15d7gfultse3Pv1xQBqaR8Wrz/hJdP0bxn4UuPDr6oStjcfa1uYpXH8DEKu0/nXpVeR/tABV0nweYeLlfEtr5W37wG184/Hb+lc38TtZvPhD40bxH4alhb/hJrN1urGQ8JcIo23O0DoN3Prz68AHuesavYaDo9zqmr3KWtlapvllfoo/rzxiuM8C/FaDxz4q1XSLfRrqwisYo5YZrptrzq2eTHj5BxkcnIParPw18H2uh+AYbSeVdRN+ftdzO53i4lfDGQnuScYPoB6Vz/hiJIP2k/F8cShEXTrMBQOn7ugDf8a/ElfDGuWegaPo82u67dxGdbOKURLHFnG95CDgEggcHp9Mngv4kjxLr174e1rRbjQdds4xM1nNKJVkiJxvRwBuHI7Dr9cc1pI3/tUeIvPGSulW/k7uy7Vzj2yT+NQeLLqHTv2m9GvS20Q+HpZLoryRGruckfhQB1fxN+Jtt8OtNgdNPbVdQuN7x2STCMiJBl5GbBwoHHTkkCtKfx5pmn/DdPGWrBrWyNpHcNGPnYFwMIOmSSwA6fhXz7e+O/DPibQvGHiPXtYhXXdVsZbTTtPKOTbQAERxA4wCT8zc4JNbnirxDpmufs6+Hl0m8W5Sz1Kxtr0KCBGwTJVsjpkr7UAdoPjXf6eLS/8AFHgi90fQruVY11H7Wsxi3H5TJGFG0ficdOvFbfibxVqenfFrwho9jcgabqdvdPcw+Wp8wqFKncRkYz2I96o/GyOBfgDrSyBQiwQbM/3vOjxj3zXFeK9Im8QeLPhjp013cWjTaZOs0kLlHKhE3LuHIz0OOcE0AfQNebfEf4z6X4Ba4tLXT59a1K1VHuoIW8uO1VyNpkkwQpO4YGCTkdK5aXQYPhP8ZPClr4Wmni07xEtxDe2JlZkLRqCJACTg5Yc+x9TXQ/tA2NtH8FvEd0kEazyG23yBRlv9IiHJ+gA/CgD0K91VbPQJ9VW2uLpYoDMLe3TfLJgZ2qvdj0Arza9+NOo6DPa3PizwPeaRotzMsI1D7akxiJ6F41Hyjvwx/PivTdK50i1/65D+VeQ/E6/X4leIrT4e+HQtxbWl0lxrV2nKQ7c4hB6Fjnn0x9RQB3vjjx/ZeC9Psn+yzalqGpSeVYWNuQGnbGSdx4VRkZPbIrG8P/FW4uvFtr4c8X+GZ/Dl9fxs9izXK3EVxtGWXeFXDAdsfzGcLxlAIvj78P7ab5oksrkR7um7bzj3wB+FTfGkAeLvh20WBcDWTtx97Zhd34dM0AeuUUi8oM+lLQAUUUUAFFFFAGVcf8jfp/8A14XX/oy3rVrC1T7Z/wAJTpx0/wAgyiyusifIUjfBxkdD05wfpVg6te23/IQ0e4UDrJaMJ0/IYf8A8drZxbjG3b9WZqSTdzVorPttd0y6mEEV5Gs5/wCWEuY5P++Gw36VoVk4uO6LTT2CvPvgXYXml/BbQrPU7Sezuo/tG+C4jMbrm4kIypwRkEH8a9BrL8NeI9N8W+HrbW9Dmaaxut/lSMhQna5Q8HkcqaQzUooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAMrV/+QpoX/X+3/pNPWrWVq/8AyFNC/wCv9v8A0mnrVq5bR9P1ZMd2FFFFQUFFFFAHC+IvGc8HxI0/w3YXAtbezsJda1i4KBj9mTKrGuQeS5BJHIA461m6f8QtUsvg7qPxB1a3F4k0jXVlpwdYvJti4jjQuFOWx85Jzy2OBwPQJNI02XUJL6XT7V7yWA20lw0CmR4c58stjJXPO3pXDfGaztdP+A+v2mn20NrbQ20axwwRhEQeanAUcAUAdzBqAn0SLURGQJLcT7M9Mruxmsf4feLv+E78C6f4jFl9g+2+Z/o/m+Zs2StH97AznZnoOtchZSfFf/hEbfy7fwb9m+wrtLXF1v2eXxn5MZxXH6H4k1Dwp+xja6no8phvQJYYph1j33rqWHuATj0ODQB9B1xWu+INTsvjB4U0S2udmnaja3klzD5anzGjVSh3EZGCT0I968pvfAnie1sYrnwf8NtS0fxHBIkiaxJ4lhleUhgX85TJhwwzkcdfTivQvEhZvj54DLrtY2OoZUHOD5a8ZoA1PB/iDU9V+IHjfTL+58200q6to7OPy1XyleHcwyACcnnnNdrXlPhzUH0nxp8XNRiQO9m0E6q3RilqWA/Ss/wV8LdC8beALLxF4sku9S1/V4ftT6n9qdZLdmJKiMA7VC8DGMcenFAHs1ctd+NDY/FHT/CFzYbY9RsHura+8/78iE7otm3qFG7O78Kyfgnruoa/8L7ObWLlru6tpprVrlzlpljchWJ7nGBnnOM1Q+NCHSbfw340iXD+HdWjedwORbSkRyj8flFAGp48+KNn4E8SeHdJurJrn+2Z/LkmE2wWibkXzCMHcMv0yPumtXx/4xHgbwlLrAsW1GfzooLezWTyzPI7hQobBxxk9D0rzLxZoA+I+v8AxGuIh5w0nSodN09lPWZf9Jbb6HeEXPerI10fEvWvhfZ7lkjFudf1Fc52vCvlp9R5xcfhQB7QhYopcBWI5AOcH60teQrotr8Tfi94rsfFrSXej+HBbQWelrMyRF5ULtK4UjccjAz/AEqbwTbf8Ib8bNX8E6TPcNoMmjpqdvazTNILNxIIyiFiSFO7OM9hQB6xXFeD/EGp6r8QPG+mX9z5tppV1bR2cflqvlK8O5hkAE5PPOa4j4ReBNK1yym8Qa6Z7+5sdbuTp0TzOkdlsnL5VVIBYvySc5GB0HN/SdVl0LxJ8Y9Wt1DS2CxXKK3QslozAH8RQB6V4lvJ9O8J6te2jbJ7aymmiYgHDKhIOD15Feb3fjbxJJ+z/omp6de7/Fmt/ZrazkECHzJ3kG47Nu0fu1c9MDGaw9N+G2k6p8FX8W31zqEnia80mS/l1cXcglZmjZvLIztKY+UrjBFd38IrK1uPhL4Rubi2hlntrIGCV4wzRFsglSeVyODjtQA7w5rmu6v8VtetBdLL4e0m0htXAiUA3xAd9r4ycKcEZwMjiu6qC1srWxWRbK2ht1llaaQRRhA8jHLOcdWJ5J6k1PQAUUUUAFFFFAGVb/8AI36h/wBeFr/6MuK1ayrf/kb9Q/68LX/0ZcVq1pU3+S/ImOwUUUVmUFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAUta0qDXdB1DSLxpEt9QtpLWVoiAwR1KkgkEZwfQ0aLpUGhaDp+kWbSPb6fbR2sTSkFiiKFBJAAzgegrP8c3txpvw88RX1jK0N1a6VczQyr1R1iYqw+hANHga9uNS+Hnh2+vpWmurrSraaaVuru0SlmP1JJoA3aKKKACiiigDK8Uf8ihrH/XhP8A+i2rVrK8Uf8AIoax/wBeE/8A6LatWtH8C9X+hP2mFFFFZlBRRRQAVynj/wAC2/jnSLaE3Uthf2Fwt1Y3sP34JR39we4+npXV0UAeYWHwz8Qal4m07VvH3iY65/ZZLWcMdqlvGjHguVX7zcdT0rQX4Yxaj431vXfE9ymqpfwfZLeBotq21tjHlAZOc5yTxk84Fd/RQBwvhfwZ4g8KeA7vw7YeIlaWJ2Gl3stqHa3jJBCMpbD45GeOo44rl7H4afEOx8Y3fiRfGtm1/fJHHct/ZSYkRBgADdgcdxXsVFAHA+MPh3e6z4ksvFPhnWW0PxDbQfZ3nWFZY54s52uh4OD3/wABg8HfDu70jxJd+JPFGrPrWuXUYia5aNY1SMdERF4Vfau+ooA5zxV4OsvEXhTVNJhSK1lvrZ4VuBFu8ssMbsZGfzFZ0vw307UvhgPCGrAOjW0cLzxDa29ANrjrgggH9Oa7SigDyN/hR4p1iKy0vxf4yk1bQrKVZEtBapEZdv3fNcZLgeh69a2fHXwwm8V65oWpadrM2kzaNFIkDwJ86uxUhsk4wNuCpByCeleh0UAea6F8NNYPjeDxP428QnXL6ziMNptt1gjhU9SEXuecn3+lM+JXgDxf45iv9LtvFNva6DeCPNi2nKzIUKt/rNwJy657dcV6bRQBw2m+GvGg8Gapo+reKY5L24hMVnf29ksTWuRjorcn3yDXHeF/hR498HWH2Tw/4w0+2jJLMTo6Ozk9SWL5Jr2qigDhvGHw+uPF+kaPPLqjWPiPR2EttqdvGPlkwA+UPBVsAlfas7R/hrrVx4wtPEXjvxCdcu7BGSzRbdYIoN33iEX+I9yT/IY9KooAKKKKACiiigAooooAyrj/AJG/T/8Arwuv/RlvWrWVcf8AI36f/wBeF1/6Mt61auW0fT9WTHdkNzaW17CYry3iuIz1SVAwP4GqA8PWsPOnT3ennsLeY7B9EbKf+O1q0UlOS0TG4p7mV5OuW3+qurO+Xss8Zhb/AL7XI/8AHK4z4RxXvhL4WaRpGs6RqUL2/nbpDb7j80ztyikuOG9PpXpFY3hLxRYeM/C9pr+jiZbO73+WJ0Cv8rshyAT3U96rmT3QuV9GW7PWtNv5DHaXsMko6xbsOPqp5H5VeqveadZ6jF5d/aQ3KeksYbH51S/sCOD/AJBt7e2Posc3mIP+ASbgB9MUWg9nb+v66B7yNWisrbrtt0ey1BR2YNbv+Y3An8B+FH9uNBxqOmX1r6usXnJ9cx7iB9QKPZt7a/194cy6mrRVSz1Ww1AkWV5BOw6okgLL9R1H41bqGmnZjTT2CiiikMKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAMrV/+QpoX/X+3/pNPWrWVq/8AyFNC/wCv9v8A0mnrVq5bR9P1ZMd2FFFFQUFFFFABWB458L/8Jp4J1Lw99s+xfbo1T7R5XmbMMGztyM9PUVv0UAU7fTxBocWneZuEdsIPM24zhducVyehfDDT9P8AhCngDV7ptSs/LkjkuFj8pm3ytKGAy2CpYY5PKg+1dxRQB57YeAPGFpDBYS/Eq+k0uDaqxppsK3BQdFM5JJ+u3PvW/qnhL+0viBoXib7b5f8AZEFxF9m8rPm+aoGd2eMY9Dn2ro6KAOZ0XwZHpXiTxRqk90LuPxDLE72zQ7REqR7CpOTuz9BXL2nwp1/RdPl0Xwx8QL3TPD7s2yyaxjmmt1Ykskc5OVHJxwcdevNenUUAZXhnw3p3hHw3Z6HosbR2dmm1NxyzEkksx7kkkn60ninQIPFXhPU9Cu28uK/t3hMm3d5ZI4YDuQcH8K1qKAOU+HXggeAfC76W+otqdzNdSXVzeNF5ZmkfHJXc3ZVHXtWT8PPhPbeANe1bUY9Te+F4PKs4Wh2Cyg8x5DEp3HILPnt0zjmvQaKAOF134dXc/jCbxR4Q8RzeHdVu4VhvSLVLmG6VeFLRsR8wAAznoPrm94Q8Cjw3qOoaxqeq3Gt67qQVbq/nRY/kX7qJGvCKPQZrrKKAOc8EeE/+EN0KbTvtv2zzb2e68zyvLx5jltuMnpnGc81FpHgmHTvEHirULq5F5D4keMyWzRbRGqxeWVJyd2QT2FdRRQB5dbfCDVbbQn8NR+PNQHhja6R2C2kYmCNn92Z87imTyABkcZArt/B3h3/hEvBumaCLr7X9ggEPn+Xs8zHfbk4+mTW1RQAUUUUAFFFFABRRRQBlW/8AyN+of9eFr/6MuK1ayrf/AJG/UP8Arwtf/RlxWrWlTf5L8iY7BRRRWZQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBU1XTbbWdGvdLv1ZrW9t5LeZVbBKOpVgD24Jo0rTbbRtGstLsFZbWyt47eFWbJCIoVQT34ArK8fXM9n8NvEt1ZzSQXEOk3UkUsTlXjYQsQykcggjIIo8A3M958NvDV1eTST3E2k2skssrlnkYwqSzE8kknJJoA6CiiigAooooAyvFH/Ioax/14T/8Aotq1ayvFH/Ioax/14T/+i2rVrR/AvV/oT9phRRRWZQUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAZVx/yN+n/APXhdf8Aoy3rVrKuP+Rv0/8A68Lr/wBGW9atXLaPp+rJjuwoooqCgriPg54f1Pwt8JtG0fXrX7Jf23n+bCXV9u6eRhypIPysDwe9dvWD4J8WW3jjwdY+IrC3mtre88zZFNjcuyRkOccdVJoA3qKKKACiiigCpe6XYajj7dZwXBX7rSRglfoeo/Cqv9hmD/kHalfWvojS+cn0xJuIH0IrVoq1OSVrkuKZlBtetvvJY6gg7oWt3/I7gT+I/pR/byQ/8hGxvbL1Z4fMQf8AAo9wA+uK1aKfMnuv6/ryCzWzK9nqNlqCFrG7guVHUxSBsfXFWKpXmj6dfv5l3ZQyyDpKUAdfow5H4Gq39iz2/wDyDdWvIB2jmYXCf+P5b8mFFoPZ2/r+ugXkuhrUVledrtsP3traX692gkMLf98Nkf8Aj9H/AAkFtD/yELe7sD3NxAdg/wCBrlP1o9nLpqHMupq0VDa3ltexebZXEVxH/ficOPzFTVDTWjKCiiikAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBlav/wAhTQv+v9v/AEmnrVrK1f8A5Cmhf9f7f+k09atXLaPp+rJjuwoooqCgooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAyrf/kb9Q/68LX/0ZcVq1lW//I36h/14Wv8A6MuK1a0qb/JfkTHYKKKKzKCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAK+o2Ftqul3WnahF51pdwvBPGSRvR1KsMjkZBPSjTrC20rS7XTtPi8m0tIUggjBJ2IihVGTycADrWL8QpHh+GPiiWF2jkTR7tldTgqRC+CD2NHw9keb4Y+F5ZnaSR9HtGd2OSxMKZJPc0AdFRRRQAUUUUAZXij/AJFDWP8Arwn/APRbVq1leKP+RQ1j/rwn/wDRbVq1o/gXq/0J+0wooorMoKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAMq4/5G/T/+vC6/9GW9atZVx/yN+n/9eF1/6Mt61auW0fT9WTHdhRRRUFBXG/CXwzqPg/4XaRoWtLGt7aed5oifeo3TO4wfowrsq5zwB4uXx34G0/xGlmbEXvmYtzL5mzZK0f3sDOdmenegDo6KKKACiiigAooooAKKKKACiiigAooooAoXWh6ZeymWeyi84/8ALZBsk/77XDfrUH9kXtv/AMg7WLhB2julFwn5nD/+PVrUVaqSWlyeVGV9q1q2P+kafBeJ/ftJtjH/AIA+B/4/R/wkVjF/x/efYHubuFo1H/A/ufrWrRT5ovdBZ9GRwzw3MQkt5UljPRo2DA/iKkrOm8P6XNKZRZpDMes1uTC5/wCBIQf1qL+y9RtubDWJGHaO9iEyj8Rtb8yaOWL2f3heS3RrUVlfbdXtv+PrS0uVH8dlOCfrsfbj6AmlXxHpoYLdyvYueNt5G0PPoCwAP4E0ezl01DmXU1KKbHIksYeJ1dG5DKcg06sygooooAKKKKACiiigAooooAKKKKACiiigDK1f/kKaF/1/t/6TT1q1lav/AMhTQv8Ar/b/ANJp61auW0fT9WTHdhRRRUFBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBlW//I36h/14Wv8A6MuK1ayrf/kb9Q/68LX/ANGXFataVN/kvyJjsFFFFZlBRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFAEN5aW9/Yz2d9Ek1tcRtFNFIMq6MMMpHoQSKLO0t7Cxgs7GJIba3jWKGKMYVEUYVQPQAAVg/Ef/klniv8A7At5/wCiHo+HH/JLPCn/AGBbP/0QlAHSUUUUAFFFFAGb4jikn8K6rFAjSSSWUyoiDLMShAAA6mmf8JFZf88NS/8ABXc//G61aKtSVrNEtO90ZX/CRWX/ADw1L/wV3P8A8bo/4SKy/wCeGpf+Cu5/+N1q0U7w7P7/APgB73cyv+Eisv8AnhqX/gruf/jdH/CRWX/PDUv/AAV3P/xutWii8Oz+/wD4Ae93Mr/hIrL/AJ4al/4K7n/43R/wkVl/zw1L/wAFdz/8brVoovDs/v8A+AHvdzK/4SKy/wCeGpf+Cu5/+N0f8JFZf88NS/8ABXc//G61aKLw7P7/APgB73cyv+Eisv8AnhqX/gruf/jdH/CRWX/PDUv/AAV3P/xutWii8Oz+/wD4Ae93Mr/hIrL/AJ4al/4K7n/43R/wkVl/zw1L/wAFdz/8brVoovDs/v8A+AHvdzK/4SKy/wCeGpf+Cu5/+N0f8JFZf88NS/8ABXc//G61aKLw7P7/APgB73cyv+Eisv8AnhqX/gruf/jdH/CRWX/PDUv/AAV3P/xutWii8Oz+/wD4Ae93Mr/hIrL/AJ4al/4K7n/43R/wkVl/zw1L/wAFdz/8brVoovDs/v8A+AHvdzK/4SKy/wCeGpf+Cu5/+N0f8JFZf88NS/8ABXc//G61aKLw7P7/APgB73cyv+Eisv8AnhqX/gruf/jdH/CRWX/PDUv/AAV3P/xutWii8Oz+/wD4Ae93Mr/hIrL/AJ4al/4K7n/43R/wkVl/zw1L/wAFdz/8brVoovDs/v8A+AHvdzK/4SKy/wCeGpf+Cu5/+N0f8JFZf88NS/8ABXc//G61aKLw7P7/APgB73cyv+Eisv8AnhqX/gruf/jdH/CRWX/PDUv/AAV3P/xutWii8Oz+/wD4Ae93MOG8TUfFVpLbwXaxw2VwrvPZywqCzwkDLqMk7W6elblFFTKSdrDSsFFFFSMK5L4W+FL7wR8NdL8ParLbzXdn53mPbMzRnfM7jBYA9GHbrXW1y/w38Wy+Ovh/pviK4tUtJL3zcwo5YLsldOp9dufxoA6iiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACkZQylWAIIwQR1paKAMyTw7pjOZILf7JK3Jks3aBifU7CM/jmmf2fqtt/x5av5yj/AJZ30Af8AybSPqc1rUVftJddSeVGT/aOqW3/AB/aOZV/56WM6yD6lW2n8Bmnx+ItLaQRy3X2WU9I7tGgYn0AcDP4Vp02SNJYykqK6N1VhkH8KfNF7r7v6YWa6ighlBUggjII70tZbeHNOVi1pG9i572crQjPuqkKfxBpps9Ztv8Aj01SO6X+5ewDcf8Agce3H/fJo5YvZ/f/AEwu+qNaisn+1NQt8/b9GmwP+WlnIs6/kdrfkpqWDX9LuJfKW8SOY9IZwYpP++HAP6UvZy7BzI0aKKKgoKKKKACiiigDI12QwXOkXJinkjgvS0nkQPKygwSrnagJxlgOnenf8JFZf88NS/8ABXc//G61aK05otJNE2d9DK/4SKy/54al/wCCu5/+N0f8JFZf88NS/wDBXc//AButWii8Oz+//gB73cyv+Eisv+eGpf8Agruf/jdH/CRWX/PDUv8AwV3P/wAbrVoovDs/v/4Ae93Mr/hIrL/nhqX/AIK7n/43R/wkVl/zw1L/AMFdz/8AG61aKLw7P7/+AHvdzK/4SKy/54al/wCCu5/+N0f8JFZf88NS/wDBXc//AButWii8Oz+//gB73cyv+Eisv+eGpf8Agruf/jdH/CRWX/PDUv8AwV3P/wAbrVoovDs/v/4Ae93Mr/hIrL/nhqX/AIK7n/43R/wkVl/zw1L/AMFdz/8AG61aKLw7P7/+AHvdzK/4SKy/54al/wCCu5/+N0f8JFZf88NS/wDBXc//AButWii8Oz+//gB73cyv+Eisv+eGpf8Agruf/jdH/CRWX/PDUv8AwV3P/wAbrVoovDs/v/4Ae93Mr/hIrL/nhqX/AIK7n/43R/wkVl/zw1L/AMFdz/8AG61aKLw7P7/+AHvdzK/4SKy/54al/wCCu5/+N0f8JFZf88NS/wDBXc//AButWii8Oz+//gB73cyv+Eisv+eGpf8Agruf/jdH/CRWX/PDUv8AwV3P/wAbrVoovDs/v/4Ae93Mr/hIrL/nhqX/AIK7n/43R/wkVl/zw1L/AMFdz/8AG61aKLw7P7/+AHvdzK/4SKy/54al/wCCu5/+N0f8JFZf88NS/wDBXc//AButWii8Oz+//gB73cyv+Eisv+eGpf8Agruf/jdH/CRWX/PDUv8AwV3P/wAbrVoovDs/v/4Ae93MXTLgXviTULqKG5SE2lvGGntpIdzK8xIAdQTgMvT1raooqZS5ncaVkFFFFSMKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAhvBbNYzjUBCbQxsJxPjyymPm3Z424znPGKLMWy2MA08Qi0EaiAQY8sJj5duONuMYxxisH4j/8ks8V/wDYFvP/AEQ9Hw4/5JZ4U/7Atn/6ISgDpKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACuX+G3hKbwN8PtN8O3N1Hdy2Xm7po1Kq2+V34B/wB7H4V1Fcl8LvFd743+G2l+IdUht4bq887zI7ZWCDZM6DAYk9FHfrQB1tFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABUc9vDcxGO5hjmjPVJFDA/gakooAyj4dso/wDjwafTz2+yTFFH/APuf+O0G21y2H+j31veqP4buHy2P/A04/8AHK1aK09pLrqTyroZP9sXdvxqOj3UY7yW2LhPwC/P/wCO1Ytdb028l8m3vYjN/wA8WbZIP+AHB/Sr1QXVla30Xl3ttDcJ/dmjDj8jReD3X9f15haS6kF9rNhpl3aW99cLBJeMUh38BiMcZ7dRV6vNvF/w+1DW9agXR1htbCGLGZp2K7yTnavOONvTHSuw8M6ZqekaStpq2orfsmBG4jKsq46Fifm/LP8ATWpTpRpqUZXfYzjObm01obNcl8RvHaeAPDsN+mntql5c3KW1tZJL5ZlYgk/Ng4AVSc49B3rra8H8deNvD7/tAafaeI9Tis9N8N2pYlwzB7qUAnhQeiY+hzXMbHrvg/xPa+MvCWn69YoY4ryIOYy24xt0Zc98EEZ9q268R+A3iTSl8Q+KPCejXyXenQXbXumSICAYJDyoBwflJAPHU1n+AvB9r8Wf7Y8VeKru8kv21CWOzeK4dDYopwgiwcLjA5/+vkA7v4QeLNX8V6RrMuuXAuJbXVZ7eJhGqbY1I2rhQM49TzW38StZvvD3w013VtIm8i9tbUvDKUDbGyBnDAg9e4rxnwJrN94R+A/jnULGdnvbO/uEjuG+9vLIm/6gtu+tHiD4V6ZY/A688Tw3t8NZfT1nubr7S5N3uxuWQEkMDnp2wKAPc/Bup3Os+C9I1C+YPc3NpFJKwAG5ioJOBwOa268B8dJcS/BT4bw2d1JaTzavYRJcRH5oi0Ei7h7jOav+PdHX4T/Ci4/4Q57m3vNZvYLaeZJyZCXzuZWYnDkKRu989qAPb6K+X4PDHiPTLzT9R8HeA9V0XVIbmOSa9OspKtxHn51kXPzAiut+KujXNz44s9W8W6PqWteExYKgh09yWsps5Z2jBG7IP3uwHsKAPc6K8U8RafP4h+CGkp8PNQvNd0iK7R7iA3DJcXVqrNuh3nBBBwMHBwvfHOr8G38JRXOqWvhNtT06dVjN5omohla2bn51Ukgbs8kE5wOncA9WrmvHPjex8C6LFe3kE13cXU621nZ24zJcSt0UdgOMkn+eBSeCPBVt4G0y6sLC7uLiCe6e5H2hgzKXOSMgDiuH+LmW+KvwzSTmBry73A/dLbY9uffrigDU0j4tXn/CS6fo3jPwpceHX1QlbG4+1rcxSuP4GIVdp/OvSq8j/aACrpPg8w8XK+JbXytv3gNr5x+O39K5v4nazefCHxo3iPw1LC3/AAk1m63VjIeEuEUbbnaB0G7n159eAD3HXNb07w5otzq2tXK2tjarullYE4yQAMDkkkgADkkgVyHgD4pxePfEOtabFot1pq6aIWje6bEkyyBiC0ePk4AOMnIbtU3w28HWmieAobS4lXUTfN9suZ3O8XErEMZCe5JAIPsPSsDwTGkP7RHxDjiUKixacAAOn+j0Ab/jX4kr4Y1yz0DR9Hm13XbuIzrZxSiJY4s43vIQcAkEDg9Ppk8F/EkeJdevfD2taLcaDrtnGJms5pRKskRON6OANw5HYdfrjmtJG/8Aao8ReeMldKt/J3dl2rnHtkn8ag8WXUOnftN6Neltoh8PSyXRXkiNXc5I/CgDq/ib8Tbb4dabA6ae2q6hcb3jskmEZESDLyM2DhQOOnJIFaU/jzTNP+G6eMtWDWtkbSO4aMfOwLgYQdMklgB0/Cvn298d+GfE2heMPEevaxCuu6rYy2mnaeUcm2gAIjiBxgEn5m5wSa3PFXiHTNc/Z18PLpN4tylnqVjbXoUECNgmSrZHTJX2oA7QfGu/08Wl/wCKPBF7o+hXcqxrqP2tZjFuPymSMKNo/E46deK29b8VanZ/Gbw5odrcj+y7/T55pofLU73VhtbdjcMegOKo/GyOBfgDrSyBQiwQbM/3vOjxj3zXEeINEk8SePfh/ptzd3NqJtCcTtDIUd1GNyFhyAehx24oA+g6818f/GnS/BV8+n2enz6zfQPGLtIW2RWocgDfJggMcghQCfXFc1baLF8LPjf4f0rwzNPHpPiG2mF1YtIWjV4xkSAHOCeB+dbnx7sbWH4WX9xFBGk0t7al3CgFj5yDJ/ACgD0W/wBUWx0KfU1tri6WGAzC3tk3yyYGdqr3Y9AK81vfjTqOgz2tz4s8D3mkaLczLCNQ+2pMYieheNR8o78Mfz4r0/T+dNt/+uY/lXj/AMTr9fiV4itPh74dC3FtaXSXGtXacpDtziEHoWOefTH1FAHe+OPH9l4L0+yf7LNqWoalJ5VhY25AadsZJ3HhVGRk9sisbw/8Vbi68W2vhzxf4Zn8OX1/Gz2LNcrcRXG0ZZd4VcMB2x/MZwvGUAi+Pvw/tpvmiSyuRHu6btvOPfAH4VN8aQB4u+HbRYFwNZO3H3tmF3fh0zQB65RSLygz6UtABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBDeXFta2M9xfyRxWsMbPNJMQERAMsWJ4AAznNFncW11YwXFhJHLazRq8MkJBR0IypUjggjGMVhfERGk+F/ilI1LM2jXYVVGST5L8UfDtGj+F/hZJFKsujWgZWGCD5KcUAdHRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVzngDwivgTwNp/hxLw3wsvMxcGLy9++VpPu5OMb8de1dHXG/CXxNqPjD4XaRrutNG17d+d5piTYp2zOgwPoooA7KiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAK4XwT8OE8N3Gs3esXMeq3uq30l3LcNFs+8chQMnAHpmu6ooA4bVPh2H+JWjeLtEuUsZbKF7a7txFkXUTZwM5GCCSehzx6ViN8K/EGj6vqf/CFeLptH0jVrhri5s1tkd43b7xikb7mfocV6pRQB514Q+E9toHgrXPDGp3Zv7HVpZWZsFWVXAGMknLDH3vXnFc/c/B3xXfeF38LX3jqeXQo4jHbQLaojAAfIJGB3SKvB25AOBmvZaKAPPtY+G0+q+C/CuijUFik8P39reGTysifyVK7evy53ZzzjHQ10XjDwjY+NfCNzoOql1imVSskZw0bqcqw9wRW/RQB5np3gr4hW8tpbX3xAluNOtZEYJHZRRyyqpyFeTkkHGD0JHWtLxR4U8ZXusS3nhbxlJpsFzGqTWc9pHcRqQMbo933CfxGecV3VFAHm2n/AAx1Tw/4GsdI8KeJ7rS76znac3OxZUnZs7hIjcMMnPtVvwT8P9S0PxPqHiTxJrJ1bV76NYnlWFYUVF6KEXgV31FAHM+CPD+seHNMurTXdduNbd7p5Yri4JLKjHhOSeB9fyqLx/4Ft/HOkW0JupbC/sLhbqxvYfvwSjv7g9x9PSurooA8wsPhn4g1LxNp2rePvEx1z+yyWs4Y7VLeNGPBcqv3m46npWgvwxi1Hxvreu+J7lNVS/g+yW8DRbVtrbGPKAyc5zknjJ5wK7+igDgvDfgrxJ4W8AXXhzTPEiedFIf7MvprQSG3i3A+WyFsNgbhnjGRxxXN6R8NfiBpXjK+8Rr4ys3u9TaH7d/xK0AlWJdqgDdhfl4yK9hooA4Hxj8O73WfEtn4p8May2h+ILaD7O84hWWOeLOdroeDg9/8Bg8HfDu70jxJd+JPFGrPrWuXUYia5aNY1SMdERF4Vfau+ooA5zxV4OsvEXhTVNJhSK1lvrZ4VuBFu8ssMbsZGfzFZ0vw307UvhgPCGrAOjW0cLzxDa29ANrjrgggH9Oa7SigDyN/hR4p1iKy0vxf4yk1bQrKVZEtBapEZdv3fNcZLgeh69a1vGvwvufEvibR9Z0rXJtIn0m1aG3eBAWVywIbJOCOoKkYINejUUAeb+HPhtq0XjYeKvGmvHW9Thh+z27LAsMcKZzhUXgE5PPvVf4i/D7xl42a7sYfFdvb6JNJHJHZtpqs0ZTBH7zcCfmGfxxXqFFAHE6f4c8ZHwTqmj6v4ojk1C4jaO01C3s1ia2BUD7qtyRyc5B59q4vwv8ACjx74OsPsnh/xhp9tGSWYnR0dnJ6ksXyTXtVFAHDeMPh9ceL9I0eeXVGsfEejsJbbU7eMfLJgB8oeCrYBK+1Z2j/AA11q48YWniLx34hOuXdgjJZotusEUG77xCL/Ee5J/kMelUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQBXv7620zTbm/v5RDa2sTTTSsDhEUFmPHoATRYX1tqem21/YSia1uolmhlUHDowDKefUEGsfx/bzXfw18TW9rFJNPNpF1HHFGpZnYwsAoA5JJ4xR4At5rT4a+Gbe6ikhnh0i1jkikUqyMIVBUg8gg8YoA6CiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigArA8EeE7bwP4NsfDtlcS3MFn5m2WYAM2+RnOccdWIrfrifg74h1TxV8J9G1nXrn7XqFz5/mzeWqbts8iD5VAA+VQOB2oA7aiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigCrqmpW2j6PeanfuUtbKB7iZwpYqiKWY4HJ4B4o0vUrbWNHs9TsHL2t7AlxC5UqWR1DKcHkcEcVl+O7O41D4deI7Kyhae5udKuooYkGWd2iYKo9ySBR4Es7jT/h14csr2FoLm20q1imicYZHWJQyn3BBFAG9RRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAVjeEfC1h4L8K2egaQ0z2dnv8szsGc73ZzkgAdWPatmuD+Cmsahr/AMH9E1PWbuS8vZ/P8yeU5Z8XEijP0AA/CgDvKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAKesapb6Hod/q16HNtYW0lzKIxltiKWOB3OAaNH1S31zQ7DVrIOLa/to7mISDDbHUMMjscEVQ8bafdat4A8Qadp8XnXd5plzBBHuC73eJlUZOAMkjrxR4J0+60nwB4f07UIvJu7PTLaCePcG2OkSqwyMg4IPTigDbooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKy/DXhzTfCXh620TQ4WhsbXf5UbOXI3OXPJ5PLGtSvPvgXf3mqfBbQrzU7ue8upPtG+e4kMjti4kAyxyTgAD8KAPQaKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAIbyaW3sZ5re2e6mjjZ47dGVWlYDIUFiACTxkkDnk155/wm3xO/6JH/5ctt/8TXpNFAFOe5vU0OS6h0/zb9bYyJY+cq75duRF5nQZb5d3TvXBf8Jt8Tv+iR/+XLbf/E16TRQBT1e5vbPR7q40nT/7SvY4y0Nn5yw+c3Zd7cL9TXD2vjL4ky3kMdz8Kfs8LyKsk3/CRWzeWpPLYC5OBzivRKKAM7xBe6np2hXF1oWk/wBs38e3yrH7Stv5uWAP7xuFwCTz1xjvXJaX4v8AiHdata2+pfDD7BZyzKk93/wkFvL5CE4L7AuWwOcDrXfUUAZHibUdY0vRmufDmhf27eh1UWf2xLbKnq29wRx6VzmieK/H99rVtbaz8Nf7KsZGxNe/29BP5IwedijLc4GB613VFAGJ4r1TXdI0qOfwx4c/4SG7aYI9r9uS12JtYl97gg4IUY6/NntWL4c8T+OdS1yG18QfDz+xLBwxkvf7bguPLIUkDy1GTk4HtnNdrRQBz/i3WPEej21u/hbwt/wkcsjkTR/2jHaeUuODlwd2fQVn+F/EnjPVdXNv4l8Bf2BZiIsLv+2IbrLgjC7EAPOTz7V2FFAHNeLtc8UaO1oPCvg//hJBKH88/wBpxWnkYxt++Duzk9OmPeofCfiDxfq+oTReKPBH/CO26Rbo7j+1obvzHyBt2oARxk59q6uigDlfFmv+LdIvYIvC3gr/AISKB490s39qxWnlNn7u1wSeOcipPCOueKdYkuh4q8H/APCOLEFMDf2nFd+eTncPkA24wOvXPtXTUUAch4p8R+M9J1Zbfwz4D/4SCzMQY3f9sQ2uHJOU2OCeAAc+/tV7wlrPiTWLe5fxT4V/4RySNlEMf9ox3fnAjk5QDbj0PrXQ0UAcX4j8T+ONM1uW18PfD3+27FVUpe/23BbbyQCRsYZGDke+K2PCmq6/q+myzeKPDf8Awj10sxRLb7fHdb0wDv3IABySMe3vW5RQBw2u+KvHthrdza6J8N/7WsY2Ahvf7dgg84YBJ2MMrzkc+ldF4Z1HWdU0cXPiPQv7BvfMZTZ/bEucKOjb0AHPpWvRQBwOq+LviHaatdW+mfDD+0LOKVlgu/8AhILeLz0B4fYVyuRzg9K6zw9fapqOg291r2kf2NqEm7zbH7Stx5WGIH7xeGyoDcdM47VpUUAeeXfjL4kQ3s8Vr8KvtMCSMsc3/CRWyeYoPDbSuRkc47V2ujXV/e6NbXOr6d/Zd7Im6az89ZvJb+7vXhvqKvUUAebt41+JoYhfhJuAPB/4SS2Gf/Ha7y2ub2XQorq40/yL9rYSPY+crbJSuTF5g4OG+Xd071cooA82/wCE2+J3/RI//Lltv/ia727ub2HQp7q10/7TfpbNJHY+cqeZKFyIvMPAy3y7ug61cooA83Xxr8TSwDfCTaCeT/wklscf+O13Ws3V/ZaNc3Okad/al7Gm6Gz89YfOb+7vbhfqavUUAee2fjH4kTX0EV38K/s1u8irLP8A8JFbv5Sk4LbQuTgc4HWuv8Q32qaboU91oGj/ANtX6bfKsftS2/m5YA/vG4GASeeuMd606KAOC0rxd8QrvV7W31T4Y/2dZyyqs93/AG/by+ShPLbFGWx6Cul8T6lrWlaP9o8N6D/b175ir9j+2JbfKc5be4I444962KKAOG0LxV49v9btrXW/hv8A2TYyMRNe/wBuwT+SMEg7FGW5wOPWt3xXquv6RpsU3hfw3/wkN00wR7b7fHa7EwTv3OCDyAMe/tW5RQBxfhvxN441PW47bxD8Pf7DsWVi97/bUFzsIHA2IMnJ49q6TQtC03w1osGk6HaraWNvu8qFWJC7mLHkknksT+NaFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQB//Z)

As shown, “a” is the pointer variable, it is having some hexa-decimal value, this hexa-decimal value is the memory address where value of variable “b” is stored, that is where the value “Hello World” is called stored in memory. Accordingly, we can say that value of variable “b”, “Hello world” is at address “0x1040b120” in memory, and this address is stored in variable “a”. We can access the memory location “0x1040b120” using this variable “a”.

To summarize, **Pointer** is a variable that stores the memory address of another variable.

Next, let us learn how to create a Pointer in Golang.

**Declaring Pointer**

Consider the below pseudo syntax:

**var pointer\_name \*Data\_Type**

Considering it as reference, let us see how we can declare pointer of “Hello world”.

var a \*string

As learnt earlier, pointer is also a variable, so we used “var” keyword to declare “a” will be variable, and now we want this variable “a” to hold the address where “Hello World” is stored in the memory, now “Hello World” is a string type value, so we used string as data type and \* is the special character which is termed as the **dereferencing operator** used to declare pointer variable and access the value stored in the address.

So, above is a pointer of type string which can store only the memory addresses of string variables.

Till now, we have seen how to declare a pointer, but we are yet to make it hold a memory address, for doing that we need to initialize the Pointer. Let us see how to do that.

**Initialization of Pointer**

//Initializating a variable

Var b = “Hello World”

//Initialization of pointer a with memory address of variable b

Var a \*string = &b

You must have understood the above syntax but would have doubt with this “&” symbol. What does it signify?

“&” operator termed as **address operator** used to returns the address of a variable. So, what is happening have is, we are return the address of variable b, by writing “&b” and then assigning it address to the pointer declaration of “a”.

One need to have clear understanding of significance of “\*” and “&” in pointers. One is used to declare the pointer (\*), while order is used to access the address (&). s

Let us see the whole thing in action:

Step 1: Create a new go file.

Step 2: Name it as “pointer-in-go.go”

Step 3: Copy the copy give below code and paste it in the file and save the file

package main

import (

    "fmt"

)

func main() {

    //declaring and initializing variable b

    var b string = "Hello World"

    //declaring string pointer, a

    var a \*string

    //initialization of pointer

    a = &b

    fmt.Println("value of b", b)

    fmt.Println("address of b", &b)

    fmt.Println("value of a", a)

}

We can also write it as,

package main

import (

    "fmt"

)

func main() {

//declaring and initializing variable b

    var b string = "Hello World"

//declaring and initializing string pointer, a

    var a \*string = &b

    fmt.Println("value of b", b)

fmt.Println("address of b", &b)

    fmt.Println("value of a", a)

}

Step 4: Open the terminal, and run the file using the command:

**Go run pointer-in-go**

**Output:**

A black background with white text

Description automatically generated with low confidence

If you see, as discussed earlier, “&b” is used to return the address, so we can see it is returning address, and that address is getting stored in variable a. So, if we print the variable a, we get memory address of variable b. So, a is holding address of b.

**Note:** This value of “a” (memory address) might differ for you, as it varies system to system.

**Dereferencing the Pointer:**

Now let’s see a small use case. Let try to access the value “Hello world” using the pointer variable “a” rather than the actual variable “b”.

So the above code becomes:

package main

import (

    "fmt"

)

func main() {

    var b string = "Hello World"

    var a \*string = &b

    fmt.Println("value of b ->", b)

    fmt.Println("address of b ->", &b)

    fmt.Println("value of a ->", a)

    fmt.Println("accessing value of b using pointer a ->", \*a)

}

Output:

Text

Description automatically generated

So, using the dereferencing operator \*, we can not only declare but also access the memory location and extract value present at the memory location.

**Default value of a pointer:**

The question is, what if we do not initialize the pointer, what will be the value of pointer in that case, what it will be pointing to?

Let us see that in action:

Step: 1 Create a new file “default-pointer.go”

Step 2: Copy paste the following code into it:

package main

import (

    "fmt"

)

func main() {

    var c \*string

    fmt.Println("value of c ->", c)

}

Please observe, we created a string pointer c, but we have just declared it and not initialized it,

Step 3: Save the file and run it using command:

Go run default-pointer.go

Output:



So what we take out from the output, The default value, if we don’t initialize the pointer in Golang is nil.

What would happen if we tried to derefer this uninitialized pointer?

For that we will make small change in our code, and see the output:

Code:

package main

import (

    "fmt"

)

func main() {

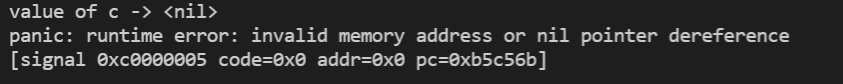
    var c \*string

    fmt.Println("value of c ->", c)

    fmt.Println("dereferencing pointer c ->", \*c)

}

Output:



So, it will throw an error. It is not permissible. One cannot dereference the uninitialized pointer.

Different Ways to Declare a pointer:

**Pointer without data type**: In this case we do not specify any data type while declaring the pointer. Code for it looks like:

package main

import (

    "fmt"

)

func main() {

    //declaring and initializing variable b

    var b string = "Hello World"

    //declaring and initialization pointer, a

    var a = &b

    fmt.Println("value of b", b)

    fmt.Println("address of b", &b)

    fmt.Println("value of a", a)

}

Whenever we assign a value to variable using & operator, compiler itself internally determine that variable as pointer.

Advantage of not specifying data type is that, now this pointer is not limited to store only address of string type value. We can make use of this pointer to store memory address of any other data type too.

**Shorthand Declaration**: Here we make use (:=) operator, using which one can declare and initialize the variable at same place, so using this our code becomes:

package main

import (

    "fmt"

)

func main() {

    //declaring and initializing variable b

    b := 20

    //declaring and initialization pointer, a

    a := &b

    fmt.Println("value of b", b)

    fmt.Println("address of b", &b)

    fmt.Println("value of a", a)

}

**Using Built-in new function** :

package main

import (

    "fmt"

)

func main() {

    //declaring and initializing variable b

    var b string = "Hello World"

    //declaring string pointer, a

    a := new(string)

    //initialization of pointer

    a = &b

    fmt.Println("value of b", b)

    fmt.Println("address of b", &b)

    fmt.Println("value of a", a)

}

Output:

A black background with white text

Description automatically generated with low confidence

How is the above code working? Whenever we create a pointer using the new function, it creates a default or zero valued pointer or nil pointer with the data type as specified as parameter to this new function. Further we can use that pointer and assign it the address of the variable to which we want it to point to.