

The diagram shows a PIC18F4550 microcontroller (U1) interfaced with an LED and a USB connector. The microcontroller is connected to a crystal (CRYSTAL) and a capacitor (C3) for timing. It is also connected to a USB connector (J1) via a USB connector (J1) and a USB connector (J1). The LED (D1) is connected to the microcontroller's output pin (RC0) and a resistor (R2). The LED (D2) is connected to the microcontroller's output pin (RC1) and a resistor (R3). The USB connector (J1) is connected to the microcontroller's pins (RC4, RC5, RC6, RC7, RC8, RC9, RC10, RC11, RC12, RC13, RC14, RC15, RC16, RC17, RC18, RC19, RC20, RC21, RC22, RC23, RC24, RC25, RC26, RC27, RC28, RC29, RC30, RC31, RC32, RC33, RC34, RC35, RC36, RC37, RC38, RC39, RC40, RC41, RC42, RC43, RC44, RC45, RC46, RC47, RC48, RC49, RC50, RC51, RC52, RC53, RC54, RC55, RC56, RC57, RC58, RC59, RC60, RC61, RC62, RC63, RC64, RC65, RC66, RC67, RC68, RC69, RC70, RC71, RC72, RC73, RC74, RC75, RC76, RC77, RC78, RC79, RC80, RC81, RC82, RC83, RC84, RC85, RC86, RC87, RC88, RC89, RC90, RC91, RC92, RC93, RC94, RC95, RC96, RC97, RC98, RC99, RC100, RC101, RC102, RC103, RC104, RC105, RC106, RC107, RC108, RC109, RC110, RC111, RC112, RC113, RC114, RC115, RC116, RC117, RC118, RC119, RC120, RC121, RC122, RC123, RC124, RC125, RC126, RC127, RC128, RC129, RC130, RC131, RC132, RC133, RC134, RC135, RC136, RC137, RC138, RC139, RC140, RC141, RC142, RC143, RC144, RC145, RC146, RC147, RC148, RC149, RC150, RC151, RC152, RC153, RC154, RC155, RC156, RC157, RC158, RC159, RC160, RC161, RC162, RC163, RC164, RC165, RC166, RC167, RC168, RC169, RC170, RC171, RC172, RC173, RC174, RC175, RC176, RC177, RC178, RC179, RC180, RC181, RC182, RC183, RC184, RC185, RC186, RC187, RC188, RC189, RC190, RC191, RC192, RC193, RC194, RC195, RC196, RC197, RC198, RC199, RC200, RC201, RC202, RC203, RC204, RC205, RC206, RC207, RC208, RC209, RC210, RC211, RC212, RC213, RC214, RC215, RC216, RC217, RC218, RC219, RC220, RC221, RC222, RC223, RC224, RC225, RC226, RC227, RC228, RC229, RC230, RC231, RC232, RC233, RC234, RC235, RC236, RC237, RC238, RC239, RC240, RC241, RC242, RC243, RC244, RC245, RC246, RC247, RC248, RC249, RC250, RC251, RC252, RC253, RC254, RC255, RC256, RC257, RC258, RC259, RC260, RC261, RC262, RC263, RC264, RC265, RC266, RC267, RC268, RC269, RC270, RC271, RC272, RC273, RC274, RC275, RC276, RC277, RC278, RC279, RC280, RC281, RC282, RC283, RC284, RC285, RC286, RC287, RC288, RC289, RC290, RC291, RC292, RC293, RC294, RC295, RC296, RC297, RC298, RC299, RC300, RC301, RC302, RC303, RC304, RC305, RC306, RC307, RC308, RC309, RC310, RC311, RC312, RC313, RC314, RC315, RC316, RC317, RC318, RC319, RC320, RC321, RC322, RC323, RC324, RC325, RC326, RC327, RC328, RC329, RC330, RC331, RC332, RC333, RC334, RC335, RC336, RC337, RC338, RC339, RC340, RC341, RC342, RC343, RC344, RC345, RC346, RC347, RC348, RC349, RC350, RC351, RC352, RC353, RC354, RC355, RC356, RC357, RC358, RC359, RC360, RC361, RC362, RC363, RC364, RC365, RC366, RC367, RC368, RC369, RC370, RC371, RC372, RC373, RC374, RC375, RC376, RC377, RC378, RC379, RC380, RC381, RC382, RC383, RC384, RC385, RC386, RC387, RC388, RC389, RC390, RC391, RC392, RC393, RC394, RC395, RC396, RC397, RC398, RC399, RC400, RC401, RC402, RC403, RC404, RC405, RC406, RC407, RC408, RC409, RC410, RC411, RC412, RC413, RC414, RC415, RC416, RC417, RC418, RC419, RC420, RC421, RC422, RC423, RC424, RC425, RC426, RC427, RC428, RC429, RC430, RC431, RC432, RC433, RC434, RC435, RC436, RC437, RC438, RC439, RC440, RC441, RC442, RC443, RC444, RC445, RC446, RC447, RC448, RC449, RC450, RC451, RC452, RC453, RC454, RC455, RC456, RC457, RC458, RC459, RC460, RC461, RC462, RC463, RC464, RC465, RC466, RC467, RC468, RC469, RC470, RC471, RC472, RC473, RC474, RC475, RC476, RC477, RC478, RC479, RC480, RC481, RC482, RC483, RC484, RC485, RC486, RC487, RC488, RC489, RC490, RC491, RC492, RC493, RC494, RC495, RC496, RC497, RC498, RC499, RC500, RC501, RC502, RC503, RC504, RC505, RC506, RC507, RC508, RC509, RC510, RC511, RC512, RC513, RC514, RC515, RC516, RC517, RC518, RC519, RC520, RC521, RC522, RC523, RC524, RC525, RC526, RC527, RC528, RC529, RC530, RC531, RC532, RC533, RC534, RC535, RC536, RC537, RC538, RC539, RC540, RC541, RC542, RC543, RC544, RC545, RC546, RC547, RC548, RC549, RC550, RC551, RC552, RC553, RC554, RC555, RC556, RC557, RC558, RC559, RC560, RC561, RC562, RC563, RC564, RC565, RC566, RC567, RC568, RC569, RC570, RC571, RC572, RC573, RC574, RC575, RC576, RC577, RC578, RC579, RC580, RC581, RC582, RC583, RC584, RC585, RC586, RC587, RC588, RC589, RC590, RC591, RC592, RC593, RC594, RC595, RC596, RC597, RC598, RC599, RC600, RC601, RC602, RC603, RC604, RC605, RC606, RC607, RC608, RC609, RC610, RC611, RC612, RC613, RC614, RC615, RC616, RC617, RC618, RC619, RC620, RC621, RC622, RC623, RC624, RC625, RC626, RC627, RC628, RC629, RC630, RC631, RC632, RC633, RC634, RC635, RC636, RC637, RC638, RC639, RC640, RC641, RC642, RC643, RC644, RC645, RC646, RC647, RC648, RC649, RC650, RC651, RC652, RC653, RC654, RC655, RC656, RC657, RC658, RC659, RC660, RC661, RC662, RC663, RC664, RC665, RC666, RC667, RC668, RC669, RC670, RC671, RC672, RC673, RC674, RC675, RC676, RC677, RC678, RC679, RC680, RC681, RC682, RC683, RC684, RC685, RC686, RC687, RC688, RC689, RC690, RC691, RC692, RC693, RC694, RC695, RC696, RC697, RC698, RC699, RC700, RC701, RC702, RC703, RC704, RC705, RC706, RC707, RC708, RC709, RC710, RC711, RC712, RC713, RC714, RC715, RC716, RC717, RC718, RC719, RC720, RC721, RC722, RC723, RC724, RC725, RC726, RC727, RC728, RC729, RC730, RC731, RC732, RC733, RC734, RC735, RC736, RC737, RC738, RC739, RC740, RC741, RC742, RC743, RC744, RC745, RC746, RC747, RC748, RC749, RC750, RC751, RC752, RC753, RC754, RC755, RC756, RC757, RC758, RC759, RC760, RC761, RC762, RC763, RC764, RC765, RC766, RC767, RC768, RC769, RC770, RC771, RC772, RC773, RC774, RC775, RC776, RC777, RC778, RC779, RC780, RC781, RC782, RC783, RC784, RC785, RC786, RC787, RC788, RC789, RC790, RC791, RC792, RC793, RC794, RC795, RC796, RC797, RC798, RC799, RC800, RC801, RC802, RC803, RC804, RC805, RC806, RC807,

The circuit diagram illustrates a 3-bit binary to decimal decoder. It consists of three 74148 ICs (U2, U3, and U4) and four 3-input AND gates (U5, U6, U7, and U8).

- IC U2:** Its inputs A0, A1, and A2 are connected to BTN0, BTN1, and BTN2 respectively. Its inputs A3, A4, and A5 are connected to BTN3, BTN4, and BTN5 respectively. Its inputs A6 and A7 are connected to BTN6 and BTN7 respectively. Its output EO is connected to the input of U3. Its output GS is connected to the input of U4. Its output A0 is connected to the input of U5. Its output A1 is connected to the input of U6. Its output A2 is connected to the input of U7. Its output A3 is connected to the input of U8.
- IC U3:** Its inputs A0, A1, and A2 are connected to BTN8, BTN9, and BTN10 respectively. Its inputs A3, A4, and A5 are connected to BTN11, BTN12, and BTN13 respectively. Its inputs A6 and A7 are connected to BTN14 and BTN15 respectively. Its output EO is connected to the input of U4. Its output GS is connected to the input of U5. Its output A0 is connected to the input of U6. Its output A1 is connected to the input of U7. Its output A2 is connected to the input of U8.
- IC U4:** Its inputs A0, A1, and A2 are connected to BTN16, BTN17, and BTN18 respectively. Its inputs A3, A4, and A5 are connected to BTN19, BTN20, and BTN21 respectively. Its inputs A6 and A7 are connected to BTN22 and BTN23 respectively. Its output EO is connected to the input of U5. Its output GS is connected to the input of U6. Its output A0 is connected to the input of U7. Its output A1 is connected to the input of U8.
- AND Gates:**
 - U5:** Inputs A0, A1, and A2 are connected to the outputs of U2, U3, and U4 respectively. Its output is A0.
 - U6:** Inputs A0, A1, and A2 are connected to the outputs of U2, U3, and U4 respectively. Its output is A1.
 - U7:** Inputs A0, A1, and A2 are connected to the outputs of U2, U3, and U4 respectively. Its output is A2.
 - U8:** Inputs A0, A1, and A2 are connected to the outputs of U2, U3, and U4 respectively. Its output is A3.

FECHA: A 18 de Agosto de 2021