|  |
| --- |
| #include <kipr/botball.h> |
|  | void movetiny(void) |
|  | { |
|  |  |
|  |  |
|  | mav(2,250); |
|  | mav(3,250); |
|  | msleep(500); |
|  | ao(); |
|  | } |
|  | void speed(void) |
|  | { |
|  | //clear\_motor\_position\_counter(0); |
|  | //clear\_motor\_position\_counter(2); |
|  | //printf("motor 0 pos = %d",get\_motor\_position\_counter(0)); |
|  | mav(2,750); |
|  | mav(3,750); |
|  | msleep(1300); |
|  | ao(); |
|  | //printf("at stop, motor 0 pos = %d",get\_motor\_position\_counter(0)); |
|  | } |
|  |  |
|  | void move4in(void) |
|  | { |
|  |  |
|  |  |
|  |  |
|  | mav(2,250); |
|  | mav(3,250); |
|  | msleep(1500); |
|  | ao(); |
|  | } |
|  | void movelittleb(void) |
|  | { |
|  | mav(2,-250); |
|  | mav(3,-250); |
|  | msleep(900); |
|  | ao(); |
|  | msleep(1000); |
|  | } |
|  | void movelittle(void) |
|  | { |
|  | mav(2,250); |
|  | mav(3,250); |
|  | msleep(900); |
|  | ao(); |
|  | msleep(1000); |
|  | } |
|  | void moveccw(void) |
|  | { |
|  | // 45 ccw |
|  | mav(2,270); |
|  | mav(3,-270); |
|  | msleep(1650); |
|  |  |
|  | ao(); |
|  | } |
|  |  |
|  |  |
|  |  |
|  | void tinyccw(void) |
|  | { |
|  | // 45 ccw |
|  | mav(2,270); |
|  | mav(3,-270); |
|  | msleep(70); |
|  |  |
|  | ao(); |
|  | } |
|  | void movecw(void) |
|  | { |
|  | mav(2,-270); |
|  | mav(3,270); |
|  | msleep(1650); |
|  | ao(); |
|  |  |
|  | } |
|  | void moveback(void) |
|  | { |
|  | mav(2,-250); |
|  | mav(3,-250); |
|  | msleep(1550); |
|  | ao(); |
|  |  |
|  | } |
|  |  |
|  |  |
|  | void move4infaster(void) |
|  | { |
|  | //clear\_motor\_position\_counter(0); |
|  | //clear\_motor\_position\_counter(2); |
|  | //printf("motor 0 pos = %d",get\_motor\_position\_counter(0)); |
|  | mav(2,500); |
|  | mav(3,500); |
|  | msleep(750); |
|  | ao(); |
|  | //printf("at stop, motor 0 pos = %d",get\_motor\_position\_counter(0)); |
|  | } |
|  | int main() |
|  | { |
|  | shut\_down\_in(119); |
|  | int close\_cnt = 0; |
|  | printf("Hello World\n"); |
|  | printf("Show Me Going"); |
|  |  |
|  | //move arm up |
|  | enable\_servo (2); |
|  | set\_servo\_position (2,200); |
|  | //open servo |
|  | { |
|  | enable\_servos(0); |
|  | set\_servo\_position (0,900); |
|  | set\_servo\_position (0,1000); |
|  | } |
|  |  |
|  | // move forward until end of start box |
|  | speed(); |
|  | //turn 90 |
|  | moveccw(); moveccw(); |
|  | //expiramental |
|  | // tinyccw(); |
|  | // move until a little b4 firetruck |
|  | speed(); speed(); |
|  | speed();movetiny(); |
|  |  |
|  |  |
|  |  |
|  | { |
|  | //move servo down |
|  | enable\_servos(2); |
|  | set\_servo\_position (2,800); |
|  | set\_servo\_position (2,1050); |
|  | } |
|  | move4in();move4in(); |
|  | //turn to move firetruck away |
|  | moveccw();movecw(); |
|  | //move close to firepole |
|  |  |
|  |  |
|  |  |
|  |  |
|  | // move until fire pole |
|  | move4in();move4in();move4in();movelittle();movetiny();movelittle();movelittle(); |
|  |  |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,600); |
|  | //start copying |
|  | //drop block away |
|  | moveback(); moveback();moveback(); movecw();movecw(); |
|  | { |
|  | //move servo up |
|  | enable\_servos(2); |
|  |  |
|  | set\_servo\_position (2,850); |
|  | } |
|  |  |
|  | move4in();move4in(); |
|  | move4infaster();move4infaster();speed();movelittle();movetiny();movetiny(); |
|  | { |
|  | //move servo up |
|  | enable\_servos(2); |
|  |  |
|  | set\_servo\_position (2,850); |
|  | } |
|  |  |
|  | //stop copying here |
|  |  |
|  | //turn to ditect fire |
|  | moveccw();moveccw(); |
|  | //moveback |
|  | moveback();moveback(); |
|  | //insert camera code here |
|  |  |
|  | //if med 1 is on fire |
|  | //move arm up |
|  | enable\_servo (2); |
|  | set\_servo\_position (2,200); |
|  | move4in();move4in();move4in();movelittle();move4infaster();movetiny(); |
|  | //open servo |
|  | { |
|  | enable\_servos(0); |
|  | set\_servo\_position (0,1000); |
|  | set\_servo\_position (0,1200); |
|  | } |
|  | moveback();moveback();moveback(); |
|  |  |
|  | moveccw();moveccw(); |
|  |  |
|  | move4in();move4in(); |
|  | move4in();move4in();move4in();movelittle();movetiny();move4in();movetiny();movetiny(); |
|  |  |
|  | movecw();movecw(); |
|  | //move servo down |
|  | enable\_servos(2); |
|  | set\_servo\_position (2,800); |
|  | set\_servo\_position (2,950); |
|  |  |
|  | move4in();move4in();movelittle(); |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,600); |
|  | moveback(); moveback();movelittleb(); movecw();movecw();move4in();move4in(); |
|  | move4in();move4in();move4in();movelittle();movetiny();move4in();movetiny();movetiny(); |
|  | moveccw();moveccw(); |
|  |  |
|  | { |
|  | enable\_servos(0); |
|  | set\_servo\_position (0,1000); |
|  | set\_servo\_position (0,1200); |
|  | } |
|  |  |
|  |  |
|  |  |
|  |  |
|  | //sc |
|  | movelittleb();movelittleb(); |
|  | moveccw();moveccw(); |
|  | move4in();move4in(); |
|  | speed();movelittle();movelittle();move4in();movetiny();movetiny(); |
|  |  |
|  | movecw();movecw(); |
|  | //move servo down |
|  | enable\_servos(2); |
|  | set\_servo\_position (2,800); |
|  | set\_servo\_position (2,950); |
|  |  |
|  | move4in();move4in();movelittle();movelittle();movelittle();movelittle();movelittle(); |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,600); |
|  | moveback(); moveback();movelittleb(); movecw();movecw();move4infaster();move4infaster(); |
|  | speed();movelittle();movelittle();movetiny(); |
|  | set\_servo\_position (2,500); |
|  | move4in();movetiny();movetiny(); |
|  | moveccw();moveccw(); |
|  |  |
|  | { |
|  | enable\_servos(0); |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,900); |
|  | } |
|  | //ec |
|  | movelittleb();movelittleb(); |
|  | moveccw();moveccw(); |
|  | move4in();move4in(); |
|  | move4in();move4in();move4in();movelittle();movetiny();move4in();movetiny();movetiny(); |
|  |  |
|  | movecw();movecw(); |
|  | //move servo down |
|  | enable\_servos(2); |
|  | set\_servo\_position (2,800); |
|  | set\_servo\_position (2,950); |
|  |  |
|  | move4in();move4in();movelittle();movelittle();movelittle();movelittle();movelittle(); |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,600); |
|  | moveback(); moveback();movelittleb(); movecw();movecw();move4in();move4in(); |
|  | move4in();move4in();move4in();movelittle();movetiny(); |
|  | set\_servo\_position (2,500); |
|  | move4in();movetiny();movetiny(); |
|  | moveccw();moveccw(); |
|  |  |
|  | { |
|  | enable\_servos(0); |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,900); |
|  | } |
|  | //ec |
|  | movelittleb();movelittleb(); |
|  | moveccw();moveccw(); |
|  | move4in();move4in(); |
|  | move4in();move4in();move4in();movelittle();movetiny();move4in();movetiny();movetiny(); |
|  |  |
|  | movecw();movecw(); |
|  | //move servo down |
|  | enable\_servos(2); |
|  | set\_servo\_position (2,800); |
|  | set\_servo\_position (2,950); |
|  |  |
|  | move4in();move4in();movelittle();movelittle();movelittle();movelittle();movelittle(); |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,600); |
|  | moveback(); moveback();movelittleb(); movecw();movecw();move4in();move4in(); |
|  | move4in();move4in();move4in();movelittle();movetiny(); |
|  | set\_servo\_position (2,500); |
|  | move4in();movetiny();movetiny(); |
|  | moveccw();moveccw(); |
|  |  |
|  | { |
|  | enable\_servos(0); |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,900); |
|  | } |
|  | //ec |
|  | while(1) |
|  | { |
|  | if(digital(4)==1) |
|  | { |
|  | printf("switch closed \n"); |
|  | printf("closes = %d \n", close\_cnt); |
|  |  |
|  | // move4in(); code |
|  |  |
|  |  |
|  | // if ((close\_cnt >1) && (close\_cnt < 3 )) |
|  | { |
|  | enable\_servos(2); |
|  | set\_servo\_position (2,800); |
|  | set\_servo\_position (2,950); |
|  | } |
|  |  |
|  | // if ((close\_cnt >20) && (close\_cnt < 22 )) |
|  | { |
|  | enable\_servos(0); |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,1000); |
|  | } |
|  | // if ((close\_cnt >22) && (close\_cnt < 25 )) |
|  | move4in();move4in();movelittle(); |
|  | // if ((close\_cnt >24) && (close\_cnt < 26 )) |
|  | { |
|  |  |
|  | set\_servo\_position (0,800); |
|  | set\_servo\_position (0,600); |
|  | } |
|  | // if ((close\_cnt >25) && (close\_cnt < 27) ) |
|  | moveback(); |
|  |  |
|  | close\_cnt++; |
|  | } |
|  | msleep(150); |
|  | printf("closes = %d \n", close\_cnt); |
|  | camera\_close(); |
|  |  |
|  | } |
|  |  |
|  | return 0; |
|  | } |
|  |  |
|  |  |